

# Annex A

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## AREA CONTINGENCY PLAN

### ANNEX A INTRODUCTION

#### APPENDIX I AUTHORITY

Section 4202 of the Oil Pollution Act of 1990 (OPA 90) amended Subsection (j) of Section 311 of the Federal Water Pollution Control Act (FWPCA) (33 U.S.C. 1321 (j)) to address the development of a National Planning and Response System. As part of this system, Area Committees have been established for each area designated by the President. These Area Committees are comprised of qualified personnel from Federal, State, and local agencies. Each Area Committee, under the direction of the Federal On-Scene Coordinator (FOSC) for the area, is responsible for developing an Area Contingency Plan (ACP) which, when implemented in conjunction with the National Contingency Plan (NCP), shall be adequate to remove a worst case discharge of oil or a hazardous substance, and to mitigate or prevent a substantial threat of such a discharge, from a vessel, offshore facility, or onshore facility operating in or near the geographic area. Each Area Committee is also responsible for working with State and local officials to pre-plan for joint response efforts, including appropriate procedures for mechanical recovery, dispersal, shoreline cleanup, protection of sensitive environmental areas, and protection, rescue, and rehabilitation of fisheries and wildlife. The Area Committee is also required to work with State and local officials to expedite decisions for the use of dispersants and other mitigating substances and devices.

The functions of designating areas, appointing Area Committee members, determining the information to be included in Area Contingency Plans, and reviewing and approving Area Contingency Plans have been delegated by Executive Order 12777 of 22 October 1991, to the Commandant of the U.S. Coast Guard (through the Secretary of Transportation) for the coastal zone, and to the Administrator of the Environmental Protection Agency for the inland zone. The term "coastal zone" is defined in the current NCP (40 CFR 300.5) to mean all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, and the waters of the Exclusive Economic Zone (EEZ). The Coast Guard has designated as areas, those portions of the Captain of the Port (COTP) zones which are within the coastal zone, for which Area Committees will prepare Area Contingency Plans. The COTP zones are described in Coast Guard regulations (33 CFR Part 3).

## ANNEX A INTRODUCTION

### APPENDIX II DEFINITIONS AND ACRONYMS

Biological Additives - microbiological cultures, enzymes, or nutrient additives that are deliberately introduced into an oil discharge for the specific purpose of encouraging biodegradation to mitigate the effects of a discharge.

Burning Agents - those additives that through physical or chemical means, improve the combustibility of the materials to which they are applied.

CERCLA - the Comprehensive Environmental Response, Compensation and Liability Act of 1980 as amended by the Superfund Amendments and Reauthorization Act of 1986.

Chemical Agents - those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the pollutant from the water.

Claim - a request, made in writing for a sum certain, for compensation for damages or removal costs resulting from an incident.

Coastal Waters - the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers. Used for classifying the size of discharges.

Coastal Zone - means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/Coast Guard agreements and identified in federal regional contingency plans.

Contiguous Zone - The zone established by the United States under Article 24 of the Convention of the Territorial Sea and Contiguous Zone. It is the zone contiguous to the territorial sea which extends nine miles seaward from the territorial sea.

Discharge - any emission (other than natural seepage), intentional or unintentional, and includes, but is not limited to spilling, leaking, pumping, pouring, emitting, emptying, or dumping.

Dispersants - chemical agents that emulsify, disperse, or solubize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Environment- the navigable waters, waters of the contiguous zone, and the ocean waters which the natural resources are under the exclusive management of the U.S. under the Magnuson Fishery Conservation and Management Act. Also includes surface water, ground water, drinking water supply, land surface and subsurface strata, or ambient air.

Exclusive Economic Zone - An area of the high seas, parallel to the territorial sea, which extends up to 200 nautical miles from the baseline from which the territorial seas are measured established by Presidential Proclamation Numbered 5030, dated March 10, 1983. In this zone, a country may exercise jurisdiction and control over natural resources (living and nonliving), including authority over artificial islands (and other structures used for economic exploitation) and for the protection and preservation of the marine environment.

Fund - the Oil Spill Liability Trust Fund.

Hazardous Material - any hazardous substance, pollutant or contaminant including natural gas, natural gas liquids, liquefied natural gas, or synthetic natural gas usable for fuel (or mixtures of natural gas and such synthetic gas), and any substance designated under the authority of any of the following laws and regulations and the subsequent implementing regulations:

(1) Section 311(b)(2) of the Clean Water Act: 40 CFR 116.4, Tables 116.4A and 116.4B, Lists of Hazardous Substances; and 40 CFR 117.3, Reportable Quantities of Hazardous Substances Designated Pursuant to Section 311 of the Clean Water Act.

(2) Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA): 40 CFR 302.4, Table 302.4, List of Hazardous Substances and Reportable Quantities.

(3) Section 3001 of the Solid Waste Disposal Act: 40 CFR 261.3, Definition of Hazardous Waste; 40 CFR 261.32, Hazardous Wastes from Specific Sources; and 40 CFR 261.33, Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof.

(4) Section 307(a) of the Clean Water Act: 40 CFR 129.4, Toxic Pollutants.

(5) Section 112 of the Clean Air Act: 40 CFR 61.01, Lists of

Pollutants and Applicability of Part 61.

(6) Section 7 of the Toxic Substance Control Act: 40 CFR 716.120, Substances and Listed Mixtures to Which This Part Applies.

(7) Section 302 of the Emergency Planning and Community Right-to-Know Act: 40 CFR 355, Appendices A and B, Extremely Hazardous Substances.

(8) Transportation regulations in 49 CFR 171.8, Hazardous Materials Regulations; 49 CFR 172.101, Hazardous Materials Table; Appendix A, Table 1, Hazardous Substances Other Than Radionuclides; Appendix A, Table 2, Radionuclides; and Appendix B, List of Marine Pollutants.

(9) Marine transportation regulations in 33 CFR 126 and 160: 126.07, Dangerous cargo; 160.203, Certain dangerous cargo; 126.09, Designated dangerous cargo; and 126.10, Cargo of particular hazard.

(10) Section 6.95 of the California Health and Safety Code, Hazardous Materials Release Response Plans and Inventory.

(11) Section 6.6 of the California Health and Safety Code, Safe Drinking Water and Toxic Enforcement Act of 1986 (commonly referred to as Proposition 65).

Pollutant or Contaminant - in accordance with the NCP, and as defined by section 101(33) of CERCLA, shall include, but not be limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under section 101(14)(A) through (F) of CERCLA, nor does it include natural gas, liquified natural gas, or synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas). For purposes of the NCP and this ACP, the term pollutant or contaminant means any pollutant or contaminant that may present an imminent and substantial danger to public health or welfare of the United States.

Hazardous Substance - in accordance with the NCP, any substance designated under the authority of the following sections:

(1) Section 311 (b)(2) of the CWA.

- (2) Section 102 of CERCLA.
- (3) Section 3001 of the Solid Waste Disposal Act.
- (4) Section 307(a) of the CWA.
- (5) Section 112 of the Clean Air Act.
- (6) Section 7 of the Toxic Substance Control Act.

The term does not include petroleum, including crude oil or any fraction thereof which is not specifically listed or designated as a hazardous substance in the first sentence of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic natural gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Inland Waters - waters of the United States in the inland zone, waters of the Great Lakes, and specified ports and harbors on the inland rivers. Used for classifying the sizes of discharges.

Inland Zone - The environment inland of the Coastal Zone excluding the Great Lakes and specified ports and harbors on inland rivers. The term inland delineates the area of Federal responsibility for response action.

Lead Agency - the Federal agency (or State agency operating pursuant to a contract/agreement or state access) that has primary responsibility for coordinating response action. The Federal lead agency that provides the OSC as specified in section 202.1 and Annex II of the Region IX Mainland Regional Contingency Plan.

Major Disaster - any event in any part of the U.S. which, as determined by the President, is or threatens to become of sufficient severity or magnitude to warrant disaster assistance by the federal Government to supplement the efforts and resources of State and local governments and relief organizations in alleviating the damage, loss, hardship, or suffering caused by the event.

Natural Resources - includes land, fish, biota, wildlife, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States (including the resources of the exclusive economic zone), any state or local government or Indian tribe, or any foreign government.

Oil - oil of any kind or in any form. Including but, not limited to: petroleum, fuel oil, sludge, oil refuse, and mixed with wastes (other than dredged spoils).

On Scene Coordinator (OSC) - The Federal official (Environmental Protection Agency, U.S. Coast Guard, or Department of Defense) predesignated to coordinate and direct pollution removal efforts.

Potential Discharge - Any accident or other circumstance which threatens to result in the discharge of oil or hazardous substance. It shall be classed by its severity based on the above guidelines.

Primary Agencies - the Departments or Agencies designated to have primary responsibility and resources to promote effective operation of this plan.

Public Health or Welfare - All of the factors effecting the health and welfare of man including, but not limited to, human health, the natural environment, fish, shellfish, wildlife, public and private property, shorelines and beaches.

Release - As defined by section 101(22) of CERCLA, any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment but excludes any release solely within the workplace; also excludes additional conditions as specified in the National Contingency Plan 40 CFR 300.6.

Remove or Removal - Removal of oil or hazardous substance(s) from the water and/or shorelines or any other actions that may be necessary to minimize or mitigate damage to the public health or welfare.

Removal Cost - The costs of removal that are incurred after a discharge of oil has occurred or, in any case in which there is substantial threat of a discharge of oil, the costs to prevent, minimize, or mitigate oil pollution from such an incident.

#### Size Classification of Discharges -

(1) Minor Discharge - Inland Waters: less than 1000 gallons of oil. Coastal Waters: less than 10000 gallons of oil.

(2) Medium Discharge - Any discharge of a harmful quantity of a hazardous substance. Inland Waters: 1000 - 10000 gallons of oil. Coastal Waters: 10000 - 100,000 gallons of oil.

(3) Major Discharge - Any discharge of a hazardous substance that poses a threat to the public health or welfare. Inland waters: more than 10,000 gallons of oil. Coastal waters: more than 100,000 gallons of oil.

#### Size Classification of Releases -

(1) Minor release - quantity of hazardous substance(s), pollutant(s), or contaminant(s), that poses minimal threat to public health or welfare, or the environment.

(2) Medium release - releases not meeting the definition of minor or

major.

(3) Major release - quantity of hazardous substance(s), pollutant(s), or contaminant(s) that poses a substantial threat.

Spill of National Significance (SONS) - a rare, catastrophic spill which greatly exceeds the response capabilities at the local and regional levels. Due to its severity, size, location and actual or potential for adverse impact on the public health and welfare and on the environment, a SONS is so complex that it requires extraordinary coordination of federal, state, local and private resources to contain and cleanup.

Territorial Seas - the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles.

United States - the States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Virgin Islands and the Trust Territory of the Pacific Islands.

Trustee - an official of a federal natural resources management agency designated in Subpart G of the NCP or a designated state official or Indian tribe who may pursue claims for damages.

Volunteer - any individual accepted to perform services by the lead agency which has the authority to accept volunteer services. A volunteer is subject to the provisions of the authorizing statute and the NCP.

ACP - Area Contingency Plan

AC - Area Committee

AIRSTA - Coast Guard Air Station

AOR - Area of Responsibility

BNTM - Broadcast Notice to Mariners

CCC - California Conservation Corps

CCC/BCDC - California Coastal Commission/San Francisco Bay Conservation and Development Commission Joint Oil Spill Program

CMC - Center for Marine Conservation

CERCLA - Comprehensive Environmental Response Compensation and Liability Act



CFR - Code of Federal Regulations

CG OWOCRS - Coast Guard Open Water Oil Containment and Recovery System

COTP - Captain of the Port

CSP - California State Parks

DFG - California Department of Fish & Game

DOI - Department of the Interior

DRG - District Response Group

DRAT - District Response Advisory Team

EEZ - Exclusive Economic Zone

EPA - Environmental Protection Agency

FOSC - Federal On-scene Coordinator

FOSO - Friends of the Sea Otter

FWPCA - Federal Water Pollution and Control Act

HAZWOPER - Hazardous Waste Operations and Emergency Response

HBRC - Humboldt Bay Response Corporation

IBRRC - International Bird Rescue and Research Center

ICS - Incident Command System

JIC - Joint Information Center

MAC - Multi-agency Committee

MBARI - Monterey Bay Aquarium Research Institute

MEXUSPAC - U.S/Mexico Pacific Coast Joint Response Team

MMC - Marine Mammal Center

MMS - Department of the Interior Minerals Management Service

MOA - Memorandum of Agreement

MOU - Memorandum of Understanding

MSO - Coast Guard Marine Safety Office

MSD - Coast Guard Marine Safety Detachment

MSRC - Marine Spill Response Corporation

NCP - National Contingency Plan

NMS - National Marine Sanctuary

NOAA - National Oceanic and Atmospheric Administration

NPFC - National Pollution Funds Center

NPREP - National Preparedness for Response Exercise Program

NRC - Coast Guard National Response Center

NRDA - Natural Resource Damage Assessment

NRT - National Response Team

NSCC - National Scheduling and Coordinating Committee

NSFCC - National Strike Force Coordination Center

NTM - Notice to Mariners

OCS - Outer Continental Shelf

OES - State of California Office of Emergency Services

OPA 90 - Oil Pollution Act of 1990

OSC - On-Scene Coordinator

OSLTF - Oil Spill Liability Trust Fund

OSPR - California Department of Fish and Game Office of Oil Spill Prevention and Response

OSRO - Oil Spill Response Organization

OSRV - Offshore Response Vessel

PIAT - Public Information Assist Team

PLE - Pacific Link Environmental

POLREP - Coast Guard Pollution Report Message

PREP - Preparedness for Response Exercise Program

PST - Pacific Strike Team

QI - Qualified Individual

RP - Responsible Party

RRT - Regional Response Team

RWQCB - Regional Water Quality Control Board

SAR - Search and Rescue

SB 2040 - California Senate Bill 2040 (Lempert-Keene-Seastrand Oil Spill Prevention and Response Act)

SIOSC - State Inter-agency Oil Spill Committee

SISRS - Site Identification and Spill Response Strategy

SLC - California State Lands Commission

SMT - Spill Management Team

SONS - Spill of National Significance

SOSC - State On-Scene Coordinator

SSC - NOAA Scientific Support Coordinator

SUPSALV - Navy Supervisor of Salvage Operations

TTX - Tabletop Exercise

UCS - Unified Command System

USCG - United States Coast Guard

USFWS - United States Fish and Wildlife Service

USNPGS - United States Naval Postgraduate School

VOSS - Vessel of Opportunity Skimming System

VTs - Coast Guard Vessel Traffic Service

VTs - Vessel Traffic Study

## ANNEX A INTRODUCTION

### APPENDIX III PURPOSE AND OBJECTIVE

The Area Committee is a spill preparedness and planning body made up of Federal, State, and local agency representatives. The Federal On-Scene Coordinator (FOSC) will coordinate the activities of the Area Committee and assist in the development of a comprehensive Area Contingency Plan that is consistent with the National Contingency Plan.

This Area Contingency Plan describes the strategy for a coordinated Federal, State and local response to a discharge or substantial threat of discharge of oil or a release of a hazardous substance from a vessel, offshore facility, or onshore facility operating within the boundaries of the North Coast Area. This plan addresses response to a most probable discharge, a maximum most probable discharge, a worst case discharge, and a discharge of maximum impact including discharges from fire or explosion. Planning for these four scenarios covers the expected range of spills likely to occur in this area.

For purposes of this plan, the most probable discharge is the size of the average spill in the area based on the historical data available. The maximum most probable discharge is also based on historical spill data, and is the size of the discharge most likely to occur taking into account such factors as the size of the largest recorded spill, traffic flow through the area, hazard assessment, risk assessment, seasonal considerations, spill histories, operating records of facilities and vessels in the area, etc. The worst case discharge for a vessel is a discharge of its entire cargo in adverse weather conditions. The worst case discharge from an offshore or onshore facility is the largest foreseeable discharge in adverse weather conditions. These scenarios are described in Annex I.

This plan shall be used as a framework for response mechanisms to evaluate shortfalls and weaknesses in the response structure before an incident, and as a guide for reviewing vessel and facility response plans required by OPA 90, to ensure consistency. The review for consistency should address, as a minimum, the economically and environmentally sensitive areas within the area, the response equipment (quantity and type) available within the area (this includes Federal, State, and local government and industry owned equipment), response personnel available, equipment and personnel needs compared to those available, protection strategies, etc.

## ANNEX A INTRODUCTION

### APPENDIX IV GEOGRAPHIC AND JURISDICTIONAL BOUNDARIES

#### TAB A AREA OF RESPONSIBILITY

Marine Safety Office San Francisco Bay's Captain of the Port (COTP) Area of Responsibility (AOR) is specified in 33 CFR 3.55-20 and comprises the land masses and waters of California north of San Luis Obispo, Kern and San Bernardino Counties; Utah, except for Washington, Kane, San Juan, and Garfield Counties; and Nevada except for Clark County. Under the Oil Pollution Act of 1990, Federal removal authority was extended to include the waters of the exclusive economic zone established by Presidential Proclamation Number 5030 dated March 10, 1983.

The purpose of this annex is to describe the USCG/EPA boundaries between coastal and inland zones for the purpose of providing On-Scene Coordinators in Region IX-Mainland.

The Coast Guard furnishes the OSC for the coastal zone and the EPA for the inland zone. In California, the dividing line between the coastal and inland zone generally follows the coastline and includes bays, rivers, estuaries, and inlets as far inland as described in Tabs B-D.

These boundaries recognize the Coast Guard's primary responsibility over discharges and releases in navigable waters from vessels and waterfront facilities as defined in 33 CFR 126.01 and EPA's primary responsibility for discharges and releases that occur on land. Previously the lines described in Tabs B-D represented the boundary lines between the coastal and inland zones; i.e., all land and water seaward of the line was the coastal zone (CG jurisdiction) and all land and water inland of the line was the inland zone (EPA jurisdiction). Since the boundary lines divided local jurisdictions, confusion often existed as to which agency would provide the OSC and also resulted in inconsistent federal responses. For example, a railcar could have a release on one side of a highway and the EPA would be the OSC. The next day, two hundred yards on the other side of the highway, another release could occur from a railcar and the CG would be the OSC. This situation could certainly confuse local responders, as well as planners. Again, this change is designed to give the CG primary responsibility for discharges and releases that occur on the water or "designated waterfront facilities" and give EPA the primary responsibility for discharges and releases that occur on land. Although the descriptions of the lines in Tabs B-D are essentially the same, they now have different significance. The lines are now called "demarcation lines" and mark the inland extent of the coastal zone regarding bays, rivers, inlets, etc. In other words, the coastal zone consists of coastal waters and internal waters as far inland as the demarcation line. The coastal zone no longer includes the land seaward of the demarcation lines; only the water.

As a general rule, the location of the source of the discharge will be the determining factor of which agency provides the OSC. When the discharge or release occurs and remains within one agency's boundary, it is clear which agency will provide the OSC. In these cases, when requested by the other agency, each agency will provide support, within the limits of their resources, to the other's OSC. When a spill occurs in one zone and flows, or threatens to flow, into another, a question can arise as to which agency will provide the OSC. This scenario is likely in the near coastal area when a spill occurs on land (EPA jurisdiction) and flows or migrates through storm drains or ditches into the water seaward of the demarcation line (USCG jurisdiction). There are two possibilities in this case: (1) The EPA provides the OSC and the CG assists the EPA with waterside clean-up operations. This was the case in the Francis Plating Fire release in which EPA was the OSC and CG coordinated waterside cleanup operations. (2) By mutual agreement, the CG would provide the OSC. This was the case in the Shell Martinez spill where the source of the spill was in the EPA zone, but, because the majority of impact and response was in the coastal zone, it was agreed that the CG should provide the OSC. Good communications and coordination between EPA and CG OSCs are vital to an effective federal response. The EPA provides the OSC for the entire States of Nevada and Arizona.

MSO San Francisco Bay's COTP Area of Responsibility has been further divided into three planning areas for the development of the OPA-90 Area Contingency Plans, as described in Tabs B-D of this appendix. See Figure A-IV-A-1.

#### **TAB B    NORTH COAST AREA**

The North Coast Area extends from the Oregon/California border south to the Mendocino County/Sonoma County line and includes the counties of Del Norte, Humboldt and Mendocino. See Figure A-IV-B-1.

The northern offshore boundary extends from the California/Oregon border along the 42-00'00" N latitude to the offshore extent of the Exclusive Economic Zone.

The southern offshore boundary extends from the Mendocino County/Sonoma County border along the 38-46'07" N latitude to the offshore extent of the Exclusive Economic Zone.

The CG/EPA demarcation line runs from the intersection of Highway 1 and the Sonoma County/ Mendocino County line north along Highway 1 to Usal Road near Rockport; north on Usal Road to Chemise Mountain Road; north on Chemise Mountain Road to Shelter Cove Road; west on Shelter Cove Road to Road; north on Kings Peak Road to Wilder Ridge Road; north on Wilder

Ridge Road to Mattole Road; north and west on Mattole to Highway 1 at Ferndale; north on Highway 1 to Highway 101 at Fernbridge; north on Highway 101 to Front Street; west on Front Street to A Street; north on A Street to Sixth Street; west on Sixth to Pebble Beach Drive; north on Pebble Beach Drive to Washington Blvd.; east on Washington to Lake Earl Drive; north on Lake Earl Drive to Highway 101; north on Highway 101 to the California-Oregon border.

**TAB C    SAN FRANCISCO BAY AND DELTA AREA**

The San Francisco Bay and Delta Area extends from the Mendocino County/Sonoma County line south to the San Mateo County/Santa Cruz County line and includes all counties on San Francisco Bay and its tributaries. These counties include: San Francisco, Marin, Napa, Contra Costa, Alameda, Santa Clara, San Mateo, Yolo, San Joaquin, Solano and Sacramento. See Figure A-IV-C-1.

The northern offshore boundary extends from the Mendocino County/Sonoma County border along the 38-46'07" N latitude to the offshore extent of the Exclusive Economic Zone.

The southern offshore boundary extends from the San Mateo County/Santa Cruz County border along the 37-06'26" N latitude to the offshore extent of the Exclusive Economic Zone.

The CG/EPA demarcation line runs from the San Mateo County/Santa Cruz County border north along Highway 1 to Hwy 35 near San Francisco; west on Hwy 35 to the Great Hwy; north on the Great Hwy to the intersection with Point Lobos Avenue; Point Lobos Avenue east to Geary Blvd.; Geary Blvd. east to Laguna Street; Laguna Street south to Bay street; Bay Street east to intersection with State Belt railroad tracks; State Belt railroad tracks south along the Embarcadero to Third Street; Third Street south to Hwy 101; Hwy 101 south to Hwy 237; Hwy 237 east to intersection with Southern Pacific railroad tracks; Southern Pacific railroad tracks north to intersection with Hwy 880 (approximately 1/2 mile south of 98th Avenue exit); Hwy 880 north to intersection with Southern Pacific Railroad tracks near Albany; Southern Pacific railroad tracks north and east until intersection with Hwy 4 (approximately 2 mile east of Antioch); Hwy 4 east to I-5 at Stockton; I-5 north to Hwy 80; Hwy 80 west to Hwy 113; Hwy 113 south to Hwy 12; Hwy 12 west to Hwy 80; Hwy 80 west to Hwy 680; Hwy 680 south to Hwy 780; Hwy 780 west to Hwy 80; Hwy 80 west to Hwy 29; Hwy 29 north to Hwy 37; Hwy 37 west to Hwy 101 near Ignacio; Hwy 101 south to Hwy 1 at Marin City; Hwy 1 north to Gualala.



**TAB D      CENTRAL COAST AREA**

The Central Coast Area extends from San Mateo County/Santa Cruz County border south to Monterey County/San Luis Obispo County border and includes Santa Cruz County and Monterey County. See Figure A-IV-D-1.

The northern offshore boundary extends from San Mateo County/Santa Cruz County border along the 37-06'26" N latitude to the offshore extent of the Exclusive Economic Zone.

The southern offshore boundary is a line extending 270 T from the Monterey County/San Luis Obispo County border to the offshore extent of the Exclusive Economic Zone.

The CG/EPA demarcation line runs north along Hwy 1 from the Monterey County/San Luis Obispo County border to the northern border of Santa Cruz County.

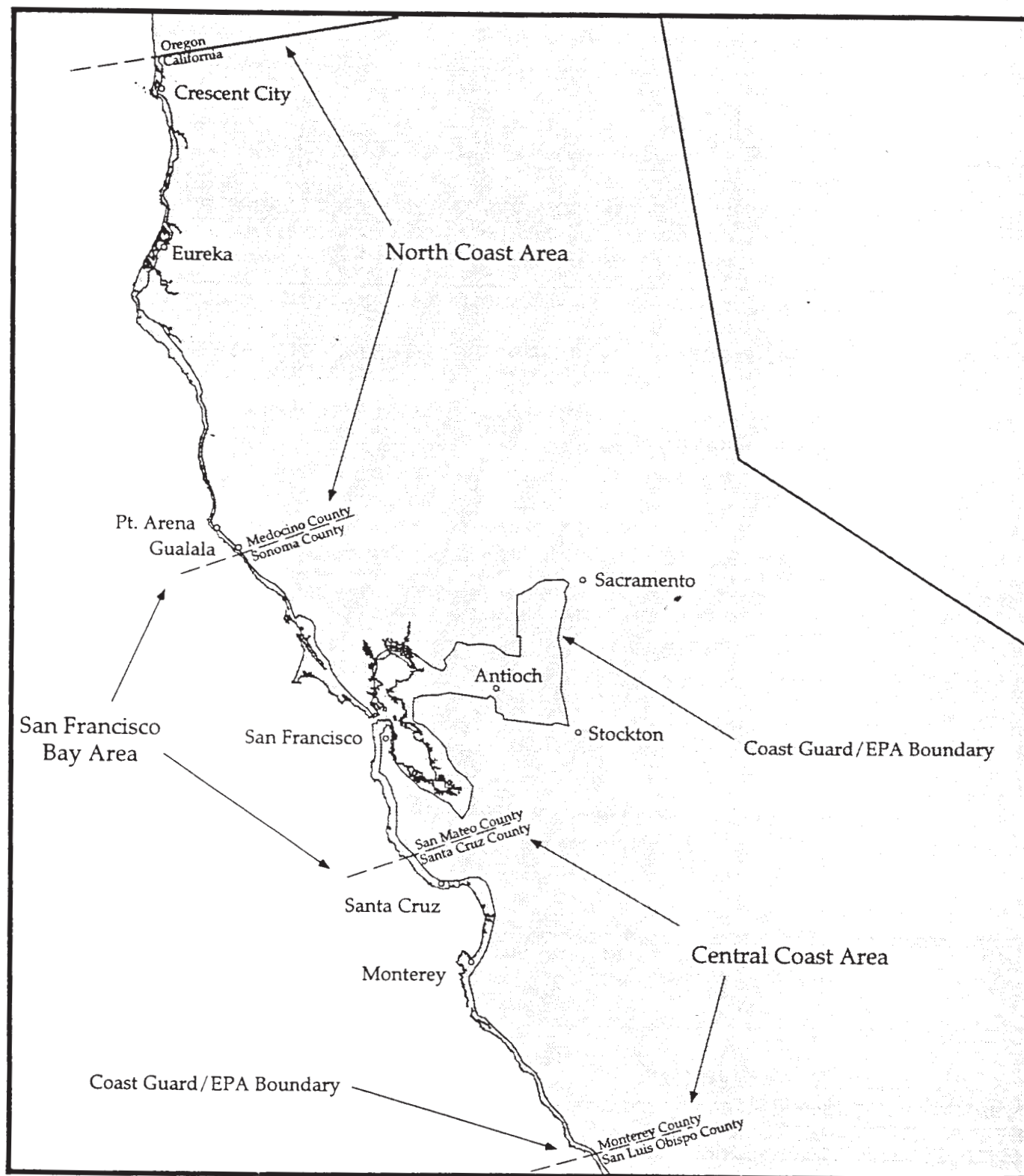


Figure 1 MSO SFO Boundaries

## ANNEX A INTRODUCTION

### APPENDIX V RESPONSE SYSTEM AND POLICIES

#### TAB A NATIONAL RESPONSE SYSTEM (See Figure A-V-A-1)

The National Response System (NRS) was developed to coordinate all government agencies with responsibility for environmental protection, in a focused response strategy for the immediate and effective clean up of an oil or hazardous substance discharge. The NRS is a three tiered response and preparedness mechanism that supports the predesignated Federal OSC in coordinating national, regional, local government agencies, industry, and the responsible party during response.

The NRS supports the responsibilities of the OSC, under the direction of the Federal Water Pollution Control Act's federal removal authority. The OSC plans and coordinates response strategy on scene, using the support of the National Response Team (NRT), Regional Response Team (RRT), Area Committees, and responsible parties as necessary, to supply the needed trained personnel, equipment, and scientific support to complete an immediate and effective response to any oil or hazardous substance discharge.

The NRS is designed to support the OSC and facilitate responses to a discharge or threatened discharge of oil or a hazardous substance. The NRS is used for all spills, including a Spill of National Significance (SONS). When appropriate, the NRS is designed to incorporate a unified command and control support mechanism (unified command) consisting of the OSC, the State's Incident Commander, and the Responsible Party's Incident Manager. The unified command structure allows for a coordinated response effort which takes into account the Federal, State, local and responsible party concerns and interests when implementing the response strategy. A unified command establishes a forum for open, frank discussions on problems that must be addressed by the parties with primary responsibility for oil and hazardous substance discharge removal. A unified command helps to ensure a coordinated, effective response is carried out and that the particular needs of all parties involved are taken into consideration. The OSC has the ultimate authority in a response operation and will exert this authority only if the other members of the unified command are not present or are unable to reach consensus within a reasonable time frame. During hazardous substance release responses in which local agencies usually assume a leading role, the local agency may assume one of the unified commander roles when a unified command is used. During responses to oil spills, local agencies are not usually involved as part of a unified command, but provide agency representatives who interface with the command structure through the Liaison Officer or the State representative. When a unified command is used, a Joint Operations

Center and Joint Information Bureau shall be established. The Joint Operations Center should be located near and convenient to the site of the discharge. All responders (Federal, State, local and private) should be incorporated into the OSC's response organization (Figure A-V-A-2) at the appropriate level.

A Spill Of National Significance (SONS) is that rare, catastrophic spill event which captures the nation's attention due to its actual damage or significant potential for adverse environmental impact. A SONS is defined as a spill which greatly exceeds the response capability at the local and regional levels and which, due to its size, location, and actual or potential for adverse impact on the environment is so complex, it requires extraordinary coordination of Federal, State, local and private resources to contain and clean up. Only the Commandant of the Coast Guard or the Administrator of the EPA can declare a SONS.

The response to a SONS event must be a coordinated response that integrates the OSC's response organization with the SONS response organization (Figure A-V-A-3), detailed in Tab H to this Appendix.

#### **TAB B    NATIONAL RESPONSE POLICY**

Section 4201 of OPA 90 amended Subsection (c) of Section 311 of the FWPCA, to require the Federal OSC to "in accordance with the National Contingency Plan and any appropriate Area Contingency Plan, ensure effective and immediate removal of a discharge, and mitigation or prevention of a substantial threat of a discharge, of oil or a hazardous substance -

- "(i)        into or on the navigable waters;
- "(ii)      on the adjoining shorelines to the navigable waters;
- "(iii)     into or on the waters of the exclusive economic zone; or
- "(iv)      that may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States."

In carrying out these functions, the OSC may:

- "(i)        remove or arrange for the removal of a discharge, and mitigate or prevent a substantial threat of a discharge, at any time;

"(ii) direct or monitor all Federal, State, and private actions to remove a discharge; and

"(iii) recommend to the Commandant that a vessel discharging or threatening to discharge, be removed and, if necessary, destroyed."

If the discharge or substantial threat of discharge of oil or hazardous substance is of such size or character as to be a substantial threat to the public health or welfare of the United States (including but not limited to fish, shellfish, wildlife, other natural resources, and the public and private beaches and shorelines of the United States), the OSC shall direct all Federal, State, and private actions to remove the discharge or to mitigate or prevent the threat of the discharge.

## **TAB C STATE RESPONSE SYSTEM**

### **COMMAND AND CONTROL RESOURCES**

Marine oil spills are typically multi-jurisdictional events involving the responsible party, the State of California represented by the Department of Fish and Game (DFG), Office of Oil Spill Prevention and Response (OSPR), local government, and the United States Coast Guard. Section 8670.7 of the California Government Code establishes that the Administrator of OSPR has the primary state authority to direct removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in the marine waters of the State. In recognition of the multi-jurisdictional nature of marine oil spills, the State Marine Oil Spill Contingency Plan provides a response frame work using the Unified Command version of the Incident Command System that meets 29 CFR 1910.120 and CCR 5192 requirements with respect to emergency management response to an oil spill discharge.

The Unified Command Structure provides for the incorporation of local government through Local Emergency Management Plans (Local Government Oil Spill Contingency Plans are a subset of this plan), SIOSC members, the responsible party and the Federal Government represented by the U.S. Coast Guard which is the pre-designated On Scene Coordinator (OSC) under the National Contingency Plan.

The Unified Command will consist of the U.S. Coast Guard, OSPR, and the responsible party. The Unified Command will direct the tactical and strategic response to an oil spill with a unified position to insure clear direction to the responsible party and efficient utilization of resources. OPA 90 clearly establishes that the OSC has the ultimate responsibility for directing oil spill response including response objectives and strategies.

The U.S. Coast Guard in recognition of the vital role and interest local government and the state have in marine oil spills, has entered into a Memorandum of Agreement with the State that formalizes designation of responsibilities and authority at the state and local level relative to marine oil spill planning and response.

#### STATE MARINE OIL SPILL RESPONSE UTILIZING UNIFIED COMMAND APPLICATION OF THE INCIDENT COMMAND SYSTEM

The Unified Command application of the incident system will represent the emergency management system implemented at marine oil spills. In keeping with basic principles of ICS, the magnitude and complexity of the emergency dictates which functional area is activated and to what level. The policy of the OSPR will be to insure that full implementation of the OSPR incident command response team is on scene within six hours of a reported spill event, in order to support and/or relieve OSPR first responders.

Local, State, and private resources will be directed, at time of arrival on scene, to the appropriate function within the Unified Command structure. It is recognized that each organization participating in the response may have a command and control organization under which it operates, of which some of the components solely support internal operations and management. The objective of the State Marine Oil Spill Contingency Plan is to identify functional areas where early integration and coordination will improve the efficiency of the response.

By integrating response management in clearly defined units early in the response, consensus and mobilization can be more quickly achieved and limited resources combined to reduce duplication of effort and enhance response performance and perception by the public.

#### State Interagency Oil Spill Committee (SIOSC)

Pursuant to Sections 8574.1 et seq. of the California Government Code, SIOSC addresses the need for a specific response to land and water releases of oil and petroleum products within California. SIOSC is composed of representatives of state agencies and is chaired by the Administrator of the OSPR.

SIOSC establishes and maintains liaison with federal and local agencies, and public and private organizations engaged in oil pollution prevention and control. It coordinates day-to-day procedures and practices between state agencies and other organizations relative to the prevention and mitigation of oil pollution from oil discharges.

SIOSC also recommends necessary research, development and testing by appropriate organizations of materials, equipment, and methods related to oil spill prevention and control, and prepares and updates the California

Oil Spill Contingency Plan. It provides guidance and state agency input to the Regional Response Team, the federal On Scene Coordinator and the State Agency Coordinator in an oil spill emergency.

The State Interagency Oil Spill Committee consists of the Administrator, OSPR as Chairman, and chair-persons from the State Lands Commission and the California Coastal Commission, or their designees, and a designated representative from all of the following agencies:

- The California Office of Emergency Services;
- The California State Water Resources Control Board;
- The California Department of Justice;
- The California Highway Patrol;
- The California National Guard;
- The California Department of Conservation (Division of Oil & Gas)
- The California Department of Fish and Game;
- The California Department of Transportation;
- The California Department of Health Services;
- The California Department of Parks and Recreation;
- The California Department of Water Resources;
- The California Department of Forestry;
- The California State Fire Marshal;
- The California Regional Water Boards;
- The California Resources Agency;
- The California Office of Environmental Affairs; and
- The California Conservation Corps.

Agency capabilities for oil spill emergency response are tabulated in Figures A-V-C-1 and A-V-C-2.

#### **TAB D STATE RESPONSE POLICY**

The lead agency for the State of California is the Department of Fish and Game, Office of Oil Spill Prevention and Response (OSPR), which has full authority, to guide and coordinate all state oil spill or hazardous materials responses that impact or threaten California coastline areas or waterways. Under California Senate Bill 2040, the Administrator of OSPR has the authority to guide and direct State oil spill cleanup efforts in State marine waters.

It is the policy of the state to respond immediately to all oil spills, control the source of any oil spill to contain any discharge to the maximum extent possible. Mechanical and other physical control methods shall be the preferred method for removal of oil from the environment with subsequent proper disposal. The option of taking no mitigative actions should be considered when such actions would cause greater environmental damage than the spilled oil alone. The use of oil spill cleanup agents shall be subject to the Administrator of OSPR's best judgement and coordinated with the federal OSC and EPA representative to the RRT.



Whenever it is determined the person(s) responsible for the discharge of the oil is taking adequate action to remove and mitigate its effects, the principle thrust of the state is to observe, monitor and provide advice and counsel, as may be necessary.

Whenever it is determined that the person(s) responsible for the discharge of oil does not act promptly, does not take proper and appropriate actions to contain, cleanup and dispose of the oil or oily debris, protect the environment, follow the accepted safety practices or the costs of such mitigating capabilities would be over and beyond those normally expected to be borne by such persons, or the discharger is unknown, the Administrator will take steps to access the state fund or the federal fund to ensure complete cleanup.

It is the policy of the state for all state agencies to follow applicable provisions of the State Contingency Plan when they are engaged in day-to-day operations when responding to oil spills.

#### **TAB E    LOCAL RESPONSE SYSTEM**

##### **DEL NORTE COUNTY -Local Response System**

##### **Del Norte County Emergency Management and Response System**

The Del Norte County Local Emergency Management Organization serves two purposes; (1) coordination and direction of county-wide response and recovery operations, and (2) support for response and recovery operations of the incorporated cities within the county.

The county emergency management organization is headed by the County Administrator (CAO) who services as Director of Emergency Services, under the direction of the Del Norte County Emergency Management Council. He or she is supported by a staff comprised of the County Emergency Services Coordinator, and functional Operations Coordinators assigned primary and support duties in the County of Del Norte Incident Emergency Management Organization chart.

Del Norte County utilizes the Incident Emergency Management System (IEMS) patterned after the Incident Command System (ICS). Under this system, the CAO is responsible for the overall management of the incident and coordination of the County's response and county departments have specific function is as shown in the County of Del Norte Emergency Organization chart.

In an emergency requiring activation of the Emergency Operations Center (EOC), or in an emergency requiring response by more than one agency, whether or not the EOC is activated, or in cases where proclamation of Local Emergency, State of Emergency, or State of War Emergency, the following command relationships will apply:



Director of Emergency Services/Incident Commander - By ordinance, the County Administrator is designated as the Director of Emergency Services. The CAO manages the county's response. For most oil spill response efforts, Incident Command will be delegated to the department of Fire Services or the Sheriff's Office, who will manage operations under the direction of the CAO.

EOC Manager - County Emergency Services Coordinator or designated alternate shall be the local EOC Manager. Responsibilities will include the management and supervision of the administrative functions of the primary/alternate EOC liaisons/operational coordinators. This individual is responsible for maintaining the operational readiness of the primary and alternate EOCs.

On-Scene Management - Generally, on-scene management is provided by the Del Norte County Sheriff's Office, Department of Fire Services or local Fire Districts Chiefs depending on the nature of the incident.

Section Chiefs- Generally, Section Chiefs and support staff are provided by the appropriate county department.

#### Telephone Contact

Office of Emergency Services (OES).....	(800) 852-7550
Or.....	(707) 464-7254
Sheriff's Office (COMMCENTER).....	(707) 464-4191
OSPR (Local Office).....	(707) 444-3728
Or beeper.....	(707) 444-6411
California Department of Forestry (Local Office).....	(707) 725-3576
California Department of Parks and Recreation.....	(707) 464-1820

#### HUMBOLDT COUNTY - Local Response System

##### **Humboldt County Emergency Management and Response System**

The County of Humboldt's Local Emergency Management Organization serves two purposes; (1) coordination and direction of county-wide response and recovery operations, and (2) support for response and recovery operations of the incorporated cities within the county.

Emergencies that are of a routine nature with a limited area of impact relatively short duration and less than dire severity are responded to and managed by those agencies with specific responsibilities for public safety (i.e. Sheriff, Public Works, Health Officers, etc.). Emergencies that exceed the response capability of local resource (i.e. a large oil spill) may require response by the county's entire emergency organization.

The county emergency management organization is headed by the Chair of the Board of Supervisors who services as Director of Emergency Services. He or she is supported by a staff comprised of the County Emergency Services Coordinator, and Operations Coordinators assigned primary and support duties in the County of Humboldt Emergency Organization chart.

Humboldt County also utilizes the Incident Command System (ICS). The Chair of the Board of Supervisors is designated as the Incident Commander. Under this system, county departments have specific functions as shown in the County of Humboldt Incident Command System Disaster Organization Chart.

In an emergency requiring activation of the Emergency Operations Center (EOC), or in an emergency requiring response by more than one agency, whether or not the EOC is activated, or in cases where proclamation of Local Emergency, State of Emergency, or State of War Emergency, the following command relationships will apply:

Director of Emergency Services/Incident Commander - By ordinance, the Chair of the Board of supervisors is designated as the Director of Emergency Services. The Chair act as Incident Commander in the county's disaster ICS. In many operations, Incident Command is delegated to the Emergency Services Coordinator, the Chief Administrative Officer (CAO) or the Sheriff who manages operations under the direction of the Chair of the Board. This entity is responsible for countywide emergency response coordination and management of the response effort.

EOC Manager - County Emergency Services Coordinator or designated alternate. This individuals responsibilities will include the management and supervision of the administrative functions of the primary/alternate EOC liaisons/operational coordinators. This individual is responsible for maintaining the operational readiness of the primary and alternate EOCs.

On-Scene Management - Generally, on-scene management is provided by the Humboldt County Sheriff's Office or local Fire Chiefs depending on the nature of the incident.

Section Chiefs- Generally, Section Chiefs and support staff are provided by the appropriate county department.

#### MENDOCINO COUNTY - Local Response System

The Mendocino County Oil Spill and Hazardous Substance Emergency Response System will be activated in support to the State Department of Fish andGame, Office of Oil Spill Prevention and Response (OSPR) Incident Commander.

Established policies and procedures and assigned responsibilities are to ensure the effective management of emergency operations during situations involving accidental oil spill or hazardous substance releases. It provides information on the dissemination of emergency public information, emergency communications, alerting and warning procedures, damage assessment and reporting. Described are the organizational and operational concepts for managing emergency operations.

To ensure that emergency operations are conducted in a timely, effective, and efficient manner, this Response System is supported by hazard specific response checklists for emergency operations involving oil spills and/or hazardous materials releases resulting from operations offshore or in support of such activities.

## Objectives

The overall objective in managing emergency operations is to ensure that effective management of emergency forces involved in preparing for and responding to situations involving offshore oil spills; hazardous substance releases; transportation, storage and distribution accidents; terrorists activities; and other potential disasters associated with exploration, development and/or production of energy resources in the outer continental shelf off the Mendocino County coast. Specifically, this will include:

Overall management and coordination of emergency operations to include on-scene incident management in support of mitigation operations coordinated by the Federal On-Scene Coordinator and State Incident Commander.

Coordinating or maintaining liaison with appropriate County, State and Federal agencies, as well as other local governmental agencies and applicable segments of the private sector.

## Local Government Departments/Agencies

Local agencies generally provide the first governmental response to the scene of an oil spill or hazardous substance release. Therefore, a local official generally will serve as On-Scene Coordinator, at least during the early stages of the event, and until the appropriate State or Federal agency representation arrives on-scene. The Emergency Services Coordinator, or in his absence a person designated by the Emergency Services Director, serves as On-Scene Manager pending arrival of representation of appropriate agency or organization. The County is responsible for directing and/or coordinating emergency operations in support of the U.S.

General responsibilities of key members of the Mendocino County Emergency Management Staff are listed below.

Emergency Services Director - Exercises overall management, direction, control and coordination of local government's response in support of emergency operations to mitigate offshore oil spills and/or hazardous substance releases.

Emergency Services Coordinator - Serves as On-Scene Coordinator for local government emergency response and recovery operations. Coordinates response activities.

Telephone Contact

Office of Emergency Services (OES).....	(707) 463-4291
Sheriff's Office Watch Commander.....	(707) 463-4086
Or.....	(707) 463-4111
Mendocino Fire District Emergency Command Center (EEC)	(707) 459-7403
California State Parks Mendocino District.....	(707) 937-5804

**TAB F    LOCAL RESPONSE POLICY**

DEL NORTE COUNTY - Local Response Policy

**Local Government Emergency Response Policy**

The role of local government, defined in various statutes including the California Emergency Services Act, and Chapter 6.95 of Division 20 of the Health and Safety Code, is to take the necessary protective actions to prevent undue risk to emergency response personnel, the population and/or the environment.

Emergencies of a routine nature with a limited area of impact, relatively short duration and less than dire severity are responded to the managed by those agencies with specific responsibilities for public safety (i.e. Sheriff, Public Works, Health Officers, etc.). Emergencies that exceed the response capability of local resources (i.e. a large oil spill) may require response by the county's entire emergency organization.

HUMBOLDT COUNTY - Local Response Policy

**Local Government Emergency Response Policy**

The role of local government, defined in various statutes including the California Emergency Services Act, and Chapter 6.95 of Division 20 of the Health and Safety Code, is to take the necessary protective actions to prevent undue risk to emergency response personnel, the population and/or the environment.

Emergencies of a routine nature with a limited area of impact, relatively short duration and less than dire severity are responded to the managed by those agencies with specific responsibilities for public safety (i.e. Sheriff, Public Works, Health Officers, etc.). Emergencies that exceed the response capability of local resources (i.e. a large oil spill) may require response by the county's entire emergency organization.

#### MENDOCINO COUNTY - Local Response Policy

It is the policy of the County of Mendocino, City of Fort Bragg, and the City of Point Arena to provide the most efficient and effective Emergency Response System available within local government resources, to deploy, mitigate, and take those necessary protective actions required in protecting natural or sensitive area resources, the population, and private property.

It is further the policy to support and coordinate with the State Office of Oil Spill Prevention and Response OSPR) and the U. S. Coast Guard, under the Unified Command System.

#### **TAB G RESPONSIBLE PARTY RESPONSE POLICY**

Under OPA 90, the responsible party has primary responsibility for cleanup of a discharge. The response shall be conducted in accordance with their applicable response plan. Section 4201(a) of OPA 90 states that an owner or operator of a tank vessel or facility participating in removal efforts shall act in accordance with the National Contingency Plan and the applicable response plan required. Section 4202 of OPA 90 states that these response plans shall:

- (i) be consistent with the requirements of the National Contingency Plan and Area Contingency Plans;
- (ii) identify the qualified individual having full authority to implement removal actions, and require immediate communications between that individual and the appropriate Federal official and the persons providing personnel and equipment pursuant to clause (iii);
- (iii) identify, and ensure by contract or other means approved by the President, the availability of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge (including a discharge resulting from fire or explosion), and to mitigate or prevent a substantial threat of such a discharge;
- (iv) describe the training, equipment testing, periodic unannounced drills, and response actions of persons on the vessel or at the facility, to be carried out under the plan to ensure the safety of the vessel or facility and to mitigate

or prevent the discharge, or the substantial threat of a discharge;

"(v) be updated periodically; and

"(vi) be resubmitted for approval of each significant change."

Each owner or operator of a tank vessel or facility required by OPA 90 to submit a response plan shall do so in accordance with applicable regulations. Facility and tank vessel response plan regulations, including plan requirements, are located in 33 CFR Parts 154 and 155, respectively.

As defined in OPA 90, each responsible party for a vessel or a facility from which oil is discharged, or which poses a substantial threat of a discharge, into or upon the navigable waters or adjoining shorelines or the Exclusive Economic Zone is liable for the removal costs and damages specified in Subsection (b) of Section 1002 of OPA 90. Any removal activity undertaken by a responsible party must be consistent with the provisions of the NCP, the Regional Contingency Plan (RCP), the Area Contingency Plan, and the applicable response plan required by OPA 90. If directed by the OSC at any time during removal activities, the responsible party must act accordingly.

Each responsible party for a vessel or facility from which a hazardous substance is released, or which poses a substantial threat of a discharge, is liable for removal costs as specified in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) (42 U.S.C. 9601 et seq.).

#### Spills Involving Multiple Parties

Under the OPA90 an incident involving two or more responsible parties, each responsible party for a vessel or facility from which oil is discharged is liable for the removal costs and damages. Each responsible parties liability extends to the entire incident not just its own oil, i.e. joint and several liability. In such a multiple party incident, the FOSC shall issue administrative orders to each responsible party.

### **TAB H     ROLE OF ON SCENE COORDINATOR**

#### **I.     STANDARD RESPONSE STRUCTURE**

The On Scene Coordinator is the predesignated Federal official responsible for ensuring immediate and effective response to a discharge or threatened discharge of oil or a hazardous substance. The U.S. Coast Guard designates OSCs for the U.S. coastal zones, while the U.S. EPA designates OSCs for the U.S. inland zones.

The first federal official affiliated with an NRT member agency to arrive

at the scene of a discharge should coordinate activities under the NCP and is authorized to initiate, in consultation with the OSC, any necessary actions normally carried out by the OSC until the arrival of the predesignated OSC. This official may initiate federal Fund-financed actions only as authorized by the OSC.

Where appropriate, the OSC shall establish a unified command consisting of the OSC, the State Incident Commander, and the Responsible Party Incident Manager. The OSC is responsible for assigning individuals from within the response community (Federal, State, local or private), as necessary, to fill the designated positions in the NRS incident level response organization. It should be noted, however, that one individual may fill several of the designated positions. These assignments will be predicated on the nature of the spill and the need for extensive manning. These positions and their responsibilities are as follows:

(1) Public Affairs Officer (PAO) - Responsible for the coordination and release of all media releases and the scheduling of press conferences related to the incident. The PAO may also establish a Joint Information Bureau (JIB) to facilitate the coordinated release of available information.

(2) Liaison Officer - Responsible for coordinating with outside agencies, individuals, or groups involved in the response.

(3) Safety Officer - Responsible for the safety of all activities associated with the response and compliance with applicable safety laws and regulations. Also responsible for assessing hazardous and unsafe situations and developing measures for assuring personnel safety.

(4) Historian - Responsible for recording the chronology of events and documenting all pertinent activity relating to the spill. All pertinent message traffic, correspondence, etc. should be included in this documentation.

(5) Response Operations Chief - Responsible for management of the tactical response to the discharge, including containment and cleanup efforts.

(6) Planning Chief - Responsible for the development of strategies for the containment and cleanup of the discharge.

(7) Logistics Chief - Responsible for ensuring that the necessary personnel and equipment are obtained and delivered to conduct response operations.

(8) Finance Chief - Responsible for the accounting management of Fund expenditures, including documentation for claims and cost recovery. This position will typically be staffed by a DRAT (see Annex F, Appendix IV, Tab C) or NPFC representative.



The OSC shall, to the extent practicable, and as soon as possible after the incident occurs, collect pertinent facts about the discharge, such as its source and cause; the identification of responsible parties; the nature, amount, and location of discharged materials; the trajectory of discharged materials; whether the discharge is a worst case discharge; the pathways to human and environmental exposure; the potential impact on human health, welfare, safety and the environment; whether the discharge poses a substantial threat to the public health or welfare; the potential impact on natural resources and property which may be affected; priorities for protecting human health and welfare and the environment; and appropriate resource documentation.

The OSC's efforts shall be coordinated with other appropriate Federal, State, local, and private response agencies. An OSC may designate capable individuals from Federal, State, or local agencies to act as her/his on scene representatives. State and local governments, however, are not authorized to take actions under Subpart D of the NCP that involve expenditures of the Oil Spill Liability Trust Fund unless an appropriate contract or cooperative agreement has been established.

The OSC should consult with the RRT, when necessary, in carrying out the requirements of the NCP and keep the RRT informed of activities under the NCP. The OSC is responsible for addressing worker health and safety concerns at a response scene.

In those instances where a possible public health emergency exists, the OSC should notify the Health and Human Services (HHS) representative to the RRT. Throughout response actions, the OSC may call upon the HHS representative for assistance in determining public health threats and call upon the Occupational Safety and Health Administration (OSHA) and HHS for advice on worker health and safety problems. The OSC shall ensure that the trustees for natural resources are promptly notified of discharges. The OSC shall coordinate all response activities with the affected natural resource trustees and shall consult with the affected trustees on the appropriate removal action to be taken. Where the OSC becomes aware that a discharge may affect any endangered or threatened species, or their habitat, the OSC shall consult with the appropriate Natural Resource Trustee.

The OSC shall submit pollution reports to the RRT and other appropriate agencies as significant developments occur during response actions, through communications networks or procedures agreed to by the RRT and covered in the RCP.

OSCs should ensure that all appropriate public and private interests are kept informed and that their concerns are considered throughout a response, to the extent practicable.



## II. SONS (SPILL OF NATIONAL SIGNIFICANCE) RESPONSE STRUCTURE

The SONS organization incorporates the unified command and control support mechanism, predesignates key positions, defines their roles, clarifies the relationships of key functional elements, and integrates the use of Coast Guard Reservists (for Coast Guard directed responses). The SONS plan provides for significant augmentation of the regional organization by a national structure containing 6 key elements: the National Incident Commander (NIC), the Alternate National Incident Manager, the National Incident Commander's Chief of Staff, the Crisis Action Center/Emergency Operations Center (CAC/EOC), the SONS Area Operations Coordinator, and the National Incident Commander's staff. The role definition of each is as follows:

- National Incident Commander (NIC) - When a Spill of National Significance is declared, the National Incident Commander will proceed to the scene, assume the role of OSC and take strategic control of the situation. The principle responsibility of the NIC will be strategic management, ensuring that all possible actions are being taken to combat the spill, thereby reassuring the public that the full force of the formal response infrastructure is being utilized for the spill. The National Incident Commander should remain on scene to provide strategic coordination of the entire response effort for as long as the response exceeds regional capabilities. The Commandant will assign a Vice Admiral in the position of National Incident Commander.

- The Alternate National Incident Commander will be the Coast Guard District Commander in whose district the spill has occurred. As District Commander, he/she will already be an integral part of the regional response structure, and will be in a position to continue liaison with the regional level officials and coordinate any resource issues with the adjacent districts or regions.

- Crisis Action Center - The Chief of the Coast Guard Headquarters Office of Marine Safety, Security and Environmental Protection will direct the Headquarters Crisis Action Center operations. The CAC Chief will be the key advisor to the Commandant of the Coast Guard and to the National Incident Commander during the incident.

- NIC Chief of Staff - The Commanding Officer of the National Strike Force Coordination Center will serve as the National Incident Commander's principal advisor and Chief of Staff. Since this Officer's primary duty is to prepare for response to a SONS, his/her response expertise will be invaluable to the National Incident Commander in developing and executing strategic plans. He/she will serve as advisor to the National Incident Commander while providing direct operational guidance to the predesignated Area Operations Coordinators.

- Area Operations Coordinator - The Predesignated On Scene Coordinator,

as Area Committee chairman, will be designated as the Area Operations Coordinator because of requisite local knowledge of the response area and the political and commercial contacts to initiate and sustain a cleanup operation. For SONS, there will most likely be multiple Area Operations Coordinators, each retaining tactical responsibility for their own area.

- Support Staff - The National Incident Commander will require a number of staff elements to effectively manage and coordinate his/her responsibilities. This will facilitate rapid implementation during a SONS event and encourage the formation of a coordinated management team. The major staff components include a Support Operations Division, a Strategic Planning Division, a Logistics Division, and a Finance Division. An External Affairs Division has been added to deal with anticipated heavy public affairs and protocol workload.

Commandant Notice 16465 dated 11 March 1994 contains guidance for establishing a National Incident Task Force (NITF) that will provide strategic management and support to execute an effective response to a Spill of National Significance (SONS) in the Coastal Zone. This notice convened a Commandant (G-M) task force comprised of representatives from Coast Guard Headquarters, MLCs, NSFCC, NPFC, selected Districts and member agencies of the National Response Team to finalize the NITF including developing an implementation protocol identifying resources, training and reserve support requirements and developing exercise scenarios and detailed job descriptions for the NITF positions. This task force met in April 1994 in Yorktown, VA. and is expected to meet again after this ACP revision is finalized. The work of the Commandant (G-M) task force is, therefore, incomplete and will not be incorporated until it is published in final.

# National Response System Concepts

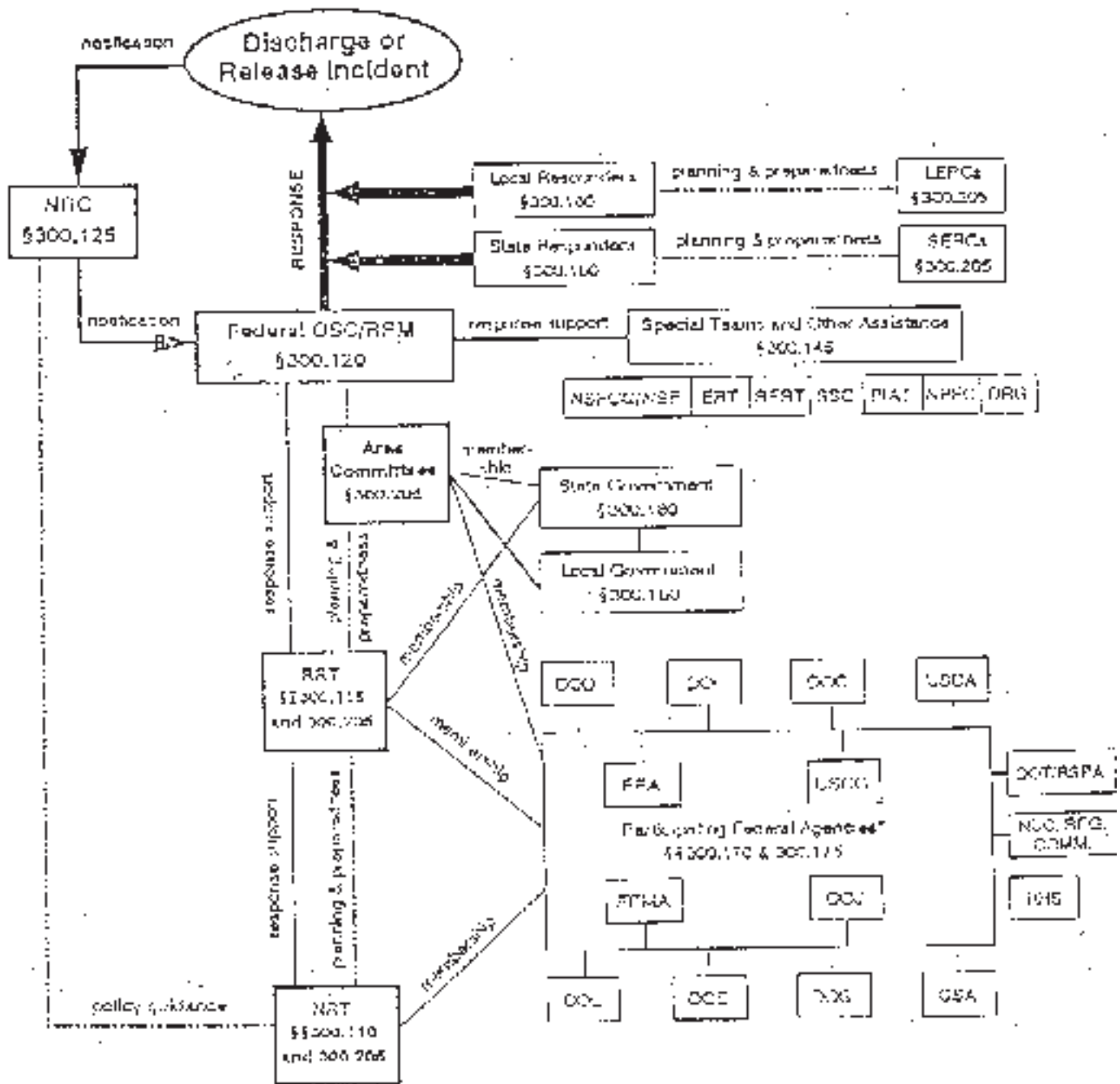


Figure 1: National Response System Concepts

# UNIFIED COMMAND SYSTEM ORGANIZATION

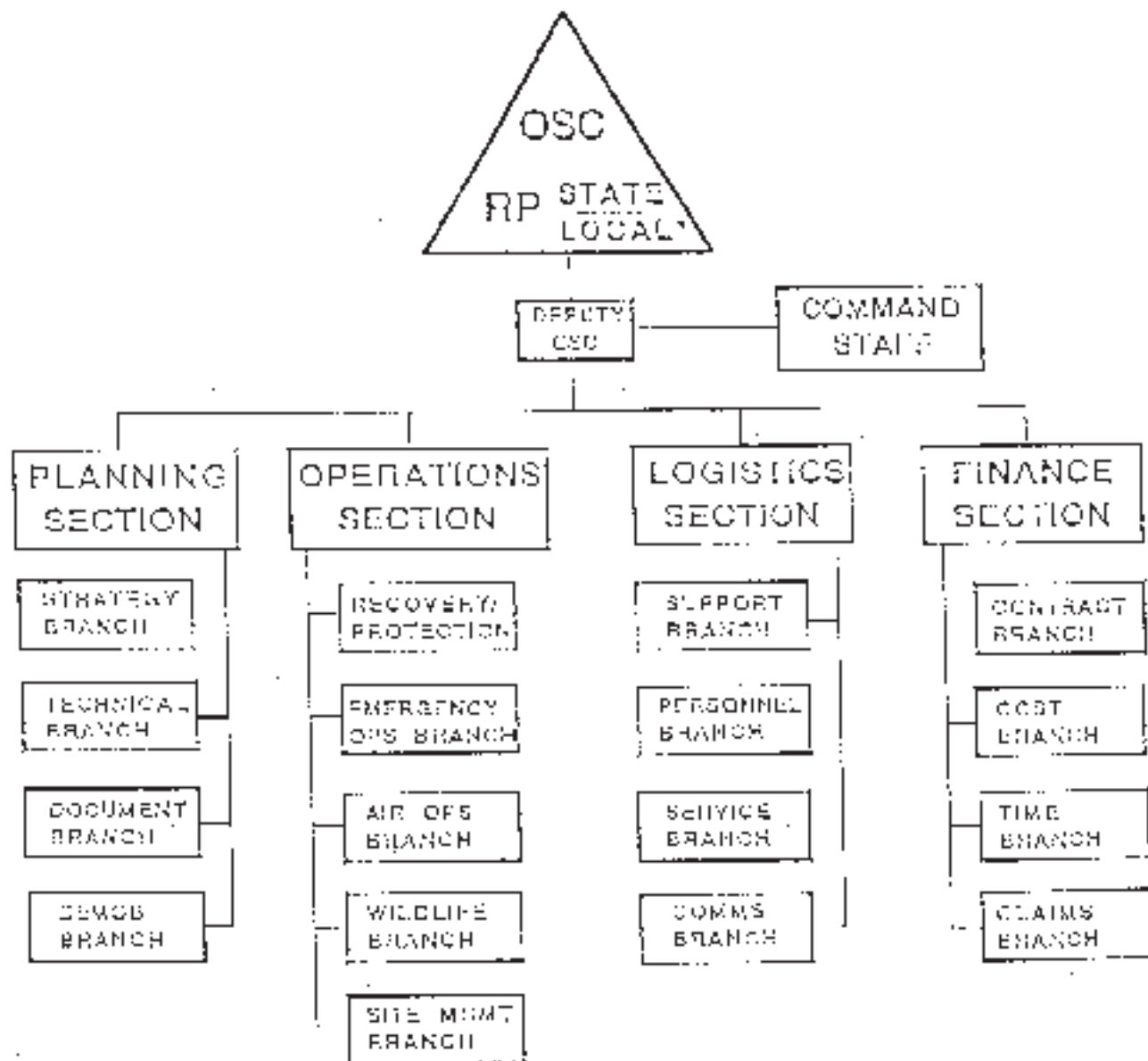


Figure 2: Unified Command System Organization

SPILL OF NATIONAL SIGNIFICANCE INCIDENT TASK  
FORCE ORGANIZATION

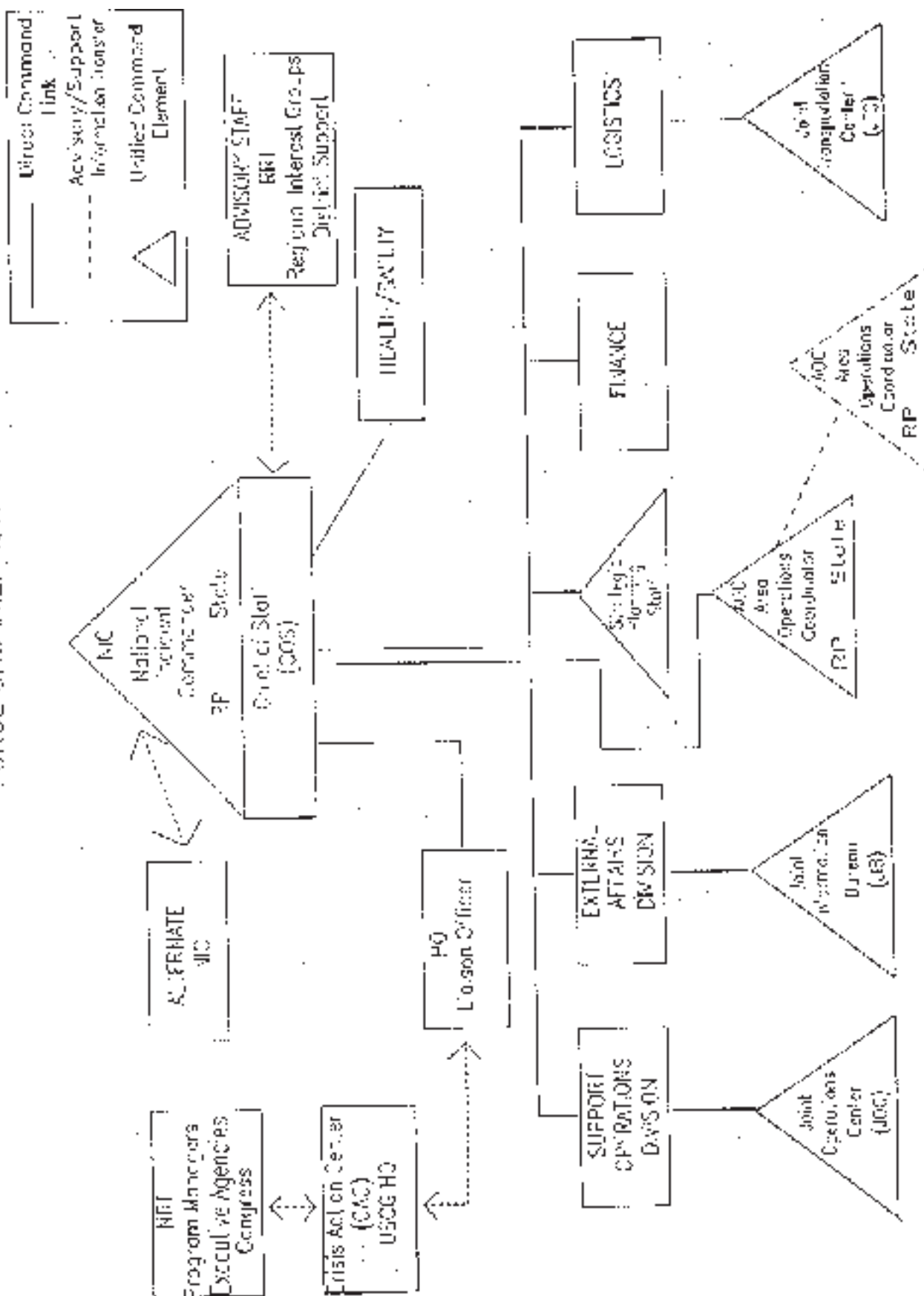


Figure 3: Spill of National Significance Incident Task Force Organization

AGENCY CAPABILITIES FOR OIL SPILL EMERGENCY RESPONSE				
STATE LEVEL				
AGENCY NAME	OPS	LOGISTICS	PLANS	FINANCE
Air Resources Board		X	X	
Coastal Commission			X	
Conservation Corps	W/OIL	X		
Conservation/Dev Oil and Gas		X	X	I
Emergency Services (OES)	PIO/LE	X	X	D
Fire Marshal	LE	X	X	
Fish & Game/OSPR	W/IC/LE	X	X	I/E/C
Forestry (CDF)	LE/FP	X	X	
Highway Patrol	IC/LE	X	X	
Department of Justice	LE	X	X	E
State Lands Commission		X	X	
National Guard		X	X	
Parks and Recreation	OIL/LE	X	X	I
Toxic Substances Control		X	X	E
Dept. of Transportation	X	X	X	I
Department of Water Resources		X	X	I
State Water Resources Control Board		X	X	E

Figure 4: State Agency Capabilities for an Oil Spill

LOCAL LEVEL				
AGENCY NAME	OPS	LOGISTICS	PLANS	FINANCE
County OES	IC	X	X	D
Fire and Rescue	FP	X	X	
Animal Services	W		X	
Law Enforcement Services	LE	X		
Mass Care Services		X		
Medical Services		X		
Public Health Services		X	X	
Public Works	OIL	X	X	
Resource and Support		X	X	

LEGEND FOR FIGURES A-V-C-1 & A-V-C-2

C	Available to affected entities/persons
D	Channels State and Federal disaster funds
E	Available to external agencies
FP	Fire protection
I	Available internally
IC	Can act as Incident Commander
LE	Law enforcement
OIL	Oil spill cleanup
PIO	Public Information Officer
W	Wildlife care
X	Provides functional support
	Note: All state agencies may have a Liaison function

Figure 5: Local Agency Capabilities for an Oil Spill



# Annex B

APPENDIX I PLANNING ORGANIZATION .....	2
APPENDIX II RESPONSE ORGANIZATION .....	4

## **ANNEX B ORGANIZATION**

### **APPENDIX I PLANNING ORGANIZATION**

#### **TAB A NATIONAL RESPONSE TEAM**

The NRT's membership consists of 15 federal agencies with responsibilities, interests and expertise in various aspects of emergency response to pollution incidents. The EPA serves as chairman and the Coast Guard serves as vice-chairman of the NRT, except when activated for a specific incident. The NRT is primarily a national planning, policy and coordination body and does not respond directly to incidents. The NRT provides policy guidance prior to an incident and assistance as requested by an OSC via an RRT during an incident. NRT assistance usually takes the form of technical advice, access to additional resources/equipment, or coordination with other RRTs.

#### **TAB B REGIONAL RESPONSE TEAM**

There are 13 RRTs, one for each of the ten federal regions and Alaska, the Caribbean and Pacific Basin. Each RRT has Federal and State representation. EPA and the Coast Guard cochair the RRTs. Like the NRT, RRTs are planning, policy and coordinating bodies, and do not respond directly to incidents. The RRTs develop Regional Contingency Plans for their regions. These plans address region specific issues and provide guidance to the OSCs for developing their area plans. The RRTs also provide one level of review for the Area Contingency Plans. The RRTs may be activated for specific incidents when requested by the OSC. If the assistance requested by an OSC exceeds an RRT's capability, the RRT may request assistance from the NRT. During an incident the RRT may either be alerted by telephone or convened. The cognizant RRTs will also be consulted by the OSC on the approval/disapproval of the use of chemical countermeasures when that decision has not been preapproved.

#### **TAB C AREA COMMITTEES**

The primary role of the Area Committee is to act as a preparedness and planning body. Area Committees are made up of experienced environmental/response representatives from Federal, State and local government agencies with definitive responsibilities for the area's environmental integrity. Each member is empowered by their own agency to make decisions on behalf of the agency and to commit the agency to carrying out roles and responsibilities as described in this plan. The predesignated Federal On-scene Coordinator for the area will serve as chairman of the Committee. He/she will designate the vice-chairman, select the Committee members, and provide general direction and guidance for the Committee. The OSC should solicit the advice of the RRT to determine appropriate representatives from federal and state agencies. The Area Committee is encouraged to solicit advice, guidance, or expertise from all appropriate sources and establish subcommittees as necessary to accomplish the preparedness and planning tasks.

Subcommittee participants may include facility owners/operators, shipping company representative, cleanup contractors, emergency response officials, marine pilots associations, academia, environmental groups, consultants, response organizations and concerned citizens. The OSC will appoint subcommittee members. The OSC directs the Area Committee's development and maintenance of the Area Contingency Plan.

## **ANNEX B ORGANIZATION**

### **APPENDIX II RESPONSE ORGANIZATION**

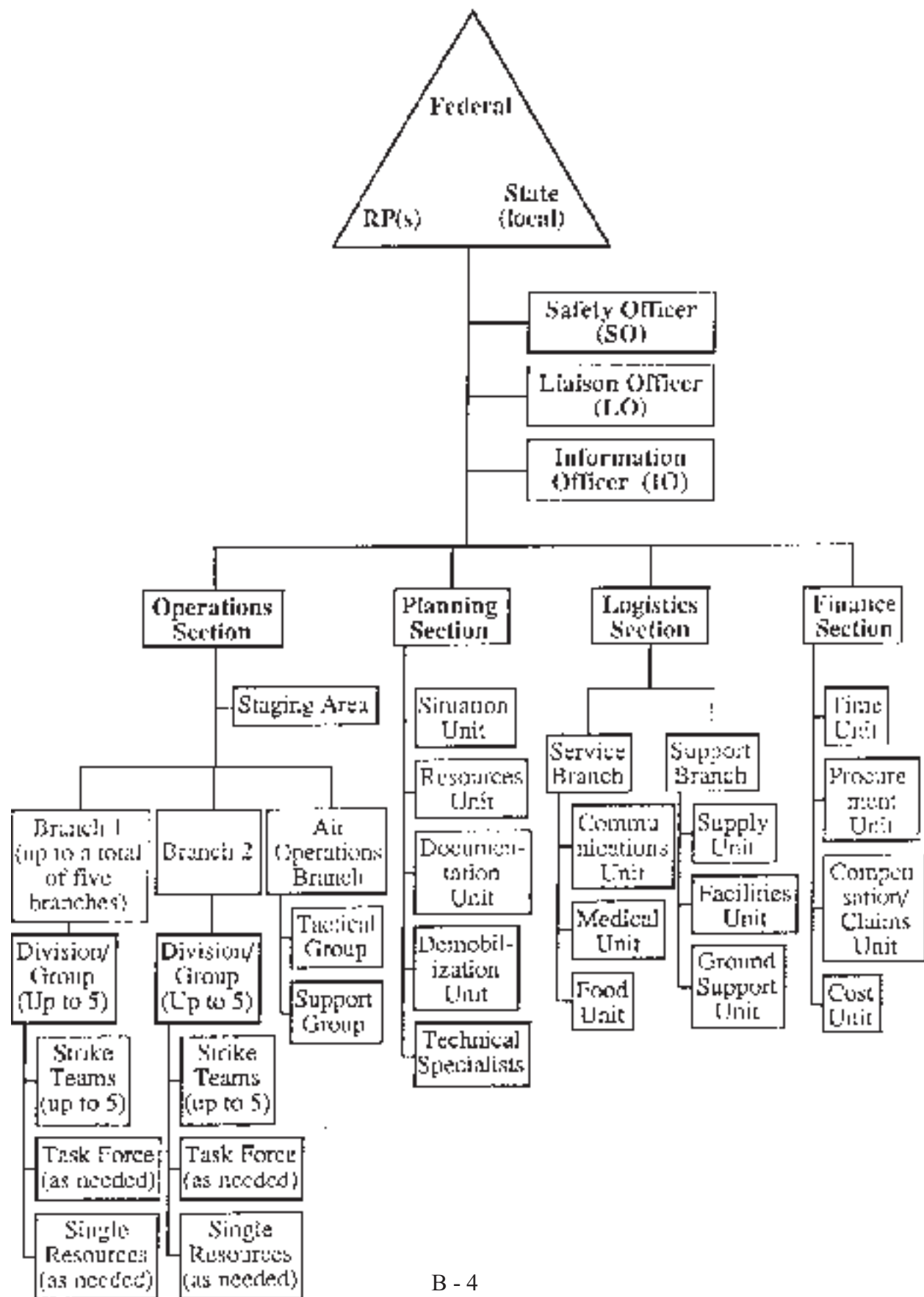
**Purpose:** The Unified Command provides the response management organization capable of anticipating and responding to pollution response emergencies. The primary goal is for all responding agencies to work together to achieve a single, unified response.

**Background:** Unified Command is based on the Incident Command System (ICS) and is intended to provide a “common ground” to jointly coordinate command and control for a large number of response agencies. The Unified Command is intended to bring together continuous decision making input from every cooperating and assisting response organization: City, County, State, Federal and the commercial community. This document alone will not serve as an implementable response management system. This Annex only represents a distillation of the entire doctrine presented by the Incident Command System, as a subsystem of the National Interagency Incident Management System (NIIMS). To effectively and efficiently implement ICS, the remaining subsystems of NIIMS must also be implemented. These remaining subsystems include: Training, Qualification Program, Publication Management, and Supporting Technology.

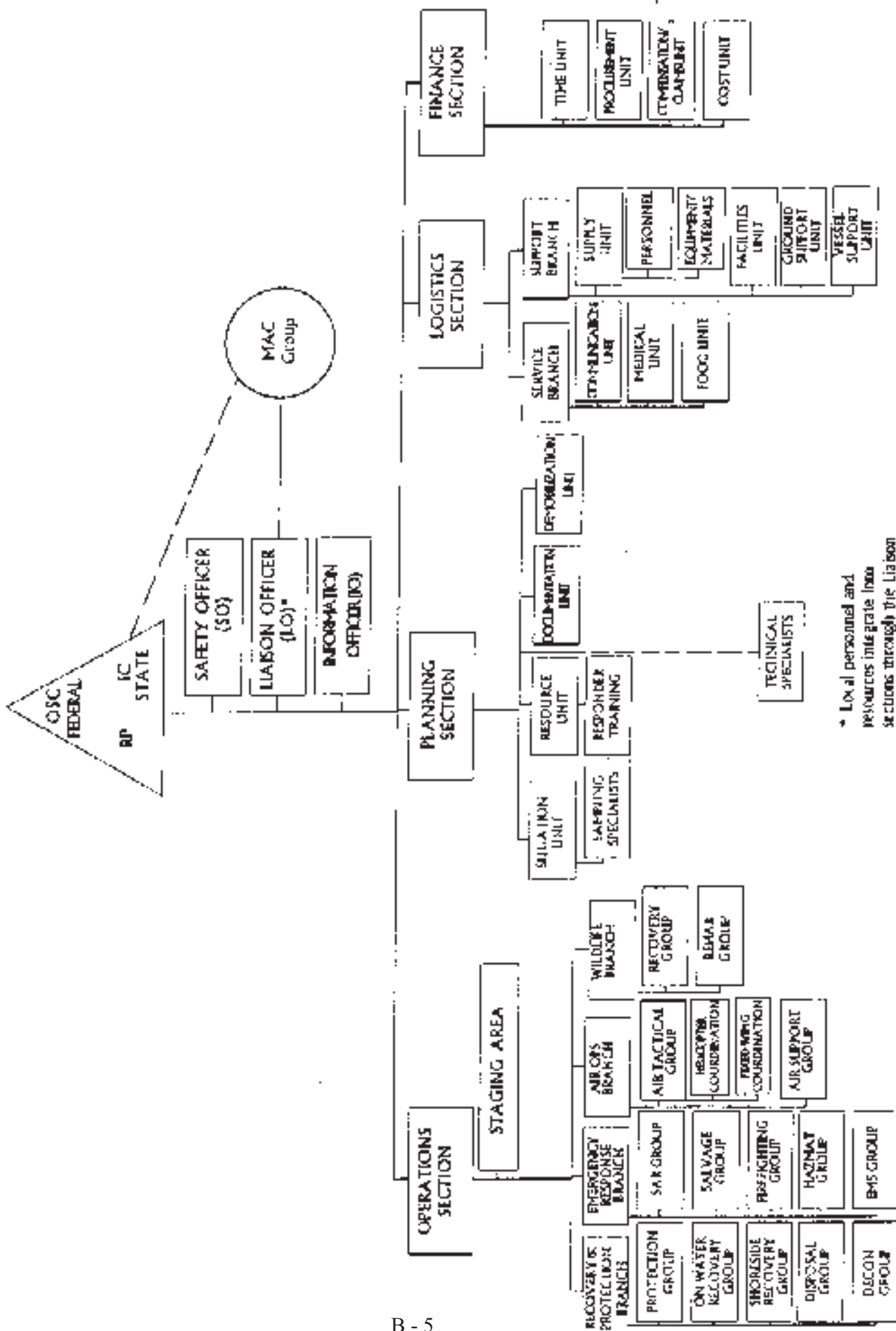
**Responsibilities:** Each responding agency is responsible to participate in the Unified Command at the appropriate action level. The Unified Command develops an Incident Action Plan (IAP) for a specified operational period. This IAP is based on the goals and objectives developed by the members of the Unified Command, which is as a result of proactive consensus building in anticipation of response requirements. Liaison and direct communication between key response decision makers must be an integral and continuous part of the emergency response process. Each participating agency retains its own organizational identity, chain of command, and direct control of personnel and resource tasking. Tasking is coordinated and documented for a specific operational period in the IAP.

**Organization:** Tabs A through F of this Appendix detail the functional division of labor of the planned organizational structure outline by ICS. Paragraphs that are bold italicized type are organizational elements that have been either subdivided from the list of responsibilities of the preceding unit and/or serve as examples of how the Operations Section and Technical Specialists could be formed for an oil spill. The Unified Command, Command Staff, and each of the Section Chiefs in Planning, Operations, Logistics, and Finance are tasked with proactively evaluating organizational requirements and recommending changes, growth, or demobilization of the organization to anticipate incident specific needs. A Field Operation Guide (FOG), ICS 420-1(OIL) is available for use as a job aid to assist responders in implementing the response organization. The FOG provides generally the same information as this Appendix, in a pocket size format.

# Standard Incident Command System



# Unified Command Structure / Incident Command System for Oil Spill Clean-up



## **TAB A UNIFIED COMMAND**

1. Incident Commanders for oil discharges in the marine environment will be organized as a Unified Command with the organizational structure prescribed by ICS. Potential members of the Unified Command include, but are not limited to:

- a. The predesignated Federal On-Scene Coordinator (OSC) acting under the authority of the National Contingency Plan (NCP);
- b. The predesignated State Incident Commander (State IC) representing State and local agencies;
- c. The Responsible Party (RP).

2. Responsibilities: The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development of goals and objectives for the response and implementation of strategic decisions and approves the ordering and releasing of resources. The Unified Command may activate Deputy Incident Commanders to assist in carrying out these management responsibilities.

- a. Assess the situation and/or obtain incident briefing from prior Unified Commander.
- b. Determine Incident Objectives and strategies.
- c. Establish immediate priorities.
- d. Establish an Incident Command Post.
- e. Activate elements of the Incident Command System.
- f. Brief Command Staff and Section Chiefs.
- g. Ensure planning meeting are scheduled as required.
- h. Approve and authorize the implementation of an Incident Action Plan
- i. Determine information needs and advise Command and General Staff.
- j. Coordinate activity for all Command and General Staff.
- k. Manage incident operations.
- l. Approve requests for additional resources and requests for release of resources.
- m. Approve the use of trainees, volunteers, and auxiliary personnel.
- n. Authorize release of information to news media.
- o. Ensure pollution reports are distributed.
- p. Ensure incident funding is available.
- q. Assure Site Safety Plan is implemented.
- r. Ensure liaison with local government(s) is established.
- s. Order the demobilization of the incident when appropriate.
- t. Identify natural resource damages and coordinate with the Natural Resources Damage Assessment (NRDA) Team.
- u. Coordinate incident investigation responsibilities.
- v. Seek appropriate legal council.

## **TAB B   COMMAND STAFF**

### **1. The Command Staff includes:**

- a. Information Officer
- b. Safety Officer
- c. Liaison Officer

**2. INFORMATION OFFICER:** The Information Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other agencies and organizations as appropriate. Only one Information Officer will be assigned for each incident, including incidents operating under Unified Command and multijurisdictional incidents. The Information Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions.

- a. Establish a single information center. (This may be called the Joint Information Center (JIC)).
- b. Contact the jurisdictional agencies to coordinate public information activities.
- c. Establish information collection requirements.
- d. Prepare initial information summary as soon as possible after arrival.
- e. Observe constraints on the release of information imposed by Incident Command.
- f. Obtain approval for release of information from Incident Command.
- g. Prepare and disseminate news releases.
- i. Attend meetings to update information releases.
- j. Arrange for meetings between media and incident personnel.
- k. Provide escort service and protective clothing to media personnel/VIPs.
- l. Respond to special requests for information.
- m. Obtain media information that may be useful to incident planning.
- n. Maintain current information summaries and/or displays of the incident and provide information on the status of the incident to incident personnel.
- o. Resolve conflicting information and bring media concerns to the Unified Command.

**3. SAFETY OFFICER:** The Safety Officer is responsible for identifying and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. The Safety Officer will correct unsafe acts or conditions through the regular line of authority, although the Officer may exercise emergency authority to stop or prevent unsafe acts when immediate action is required. The Safety Officer maintains awareness of active and developing situations, ensures the preparation and implementation of the Site Safety Plan, and includes safety messages in each Incident Action Plan. The Safety Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions.

- a. Identify hazardous or unsafe situations associated with the incident.
- b. Ensure the preparation and implementation of the Site Safety Plan.
- c. Review the IAP for safety implications.
- d. Exercise emergency authority to stop and prevent unsafe acts.
- e. Review and approve the Medical Plan.

**4. LIAISON OFFICER:** The Liaison Officer is the point of contact for personnel assigned to the incident from assisting or cooperating agencies.

- a. Provide a centralized point of contact for assisting/cooperating Agency Representatives.
- b. Identify Agency Representatives from each agency including communications link and location.



- c. Maintain the list of assisting and cooperating interagency contacts.
- d. Respond to requests from incident personnel for inter-organizational contacts.
- e. Monitor incident operations to identify current or potential inter-organizational issues and advise the Incident Command.
- f. Participate in planning meetings, provide current resource status information, including limitations and capabilities of assisting agency resources.

### **TAB C GENERAL STAFF: OPERATIONS SECTION**

1. **OPERATIONS SECTION CHIEF:** The Operations Section Chief is responsible for the tactical management of all incident operations directly applicable to the primary mission. The Operations Section Chief activates and supervises elements in accordance with the IAP and directs its execution; activates and executes the Site Safety Plan; directs the preparation of unit operational plans; requests or releases resources as directed by the Incident Command; makes expedient changes to the Incident Action Plans as necessary and reports such to the Unified Command.

- a. Develop operations portions of the IAP.
- b. Brief and assign operations personnel in accordance with the IAP.
- c. Supervise the execution of the IAP for Operations.
- d. Request resources needed to implement the Operations tactics as part of the IAP development.
- e. Ensure safe tactical operations.
- f. Make or approve expedient changes to the IAP during the operational period.
- g. Approve suggested list of resources to be released from assigned status (not released from the incident).
- h. Assemble and disassemble teams/task forces assigned to the Operations Section.
- i. Provide the Resource Unit with the Operations Section organization, including names and locations of assigned personnel.
- j. Report information about special activities, events, and occurrences to the Unified Command as well as to the Planning Section Chief and the Information Officer.

2. **STAGING AREA MANAGER:** The Staging Area Manager is responsible for managing all activities within the designated staging areas.

- a. Establish and maintain boundaries of staging areas.
- b. Post signs for identification and traffic control.
- c. Establish check-in functions.
- d. Advise Operations Section Chief of all changing situations/conditions at the staging areas.
- e. Respond to requests for resource assignments.

3. The Branch Directors are responsible for implementation of the assigned portions of the IAP.

- a. Implement Branch assignments in accordance with the Incident Action Plan.
- b. Complete operational planning for Branch operations.

4. **DIVISION/GROUP SUPERVISOR:** The Division and/or Group supervisors are responsible for the implementation of the portions of the IAP that have been assigned to their respective Division or Group, assignment of resources within the division/group, and reporting on progress of operations and status of resources within the division/group.

- a. Implement tactical operations in accordance with the IAP for division and/or group.
- b. Identify geographic areas or functions assigned to the divisions or groups.
- c. Review Site Safety Plan, assignments, and incident activities with subordinates and assign tasks.
- d. Insure the Resource Unit or incident communications is advised of all changes in status of resources assigned to the division/group.
- e. Coordinate activities with other divisions/groups.
- f. Submit situation and resource status reports to Branch Director or Operations Section Chief.
- g. Report special occurrences or events such as accidents or sickness to the immediate supervisor.
- h. Resolve conflicts within the division/group.
- i. Participate in the development of branch plans for the next operational period.

5. **TEAM/TASK FORCE LEADER:** The Team/Task Force Leader reports to a Division or Group supervisor and is responsible for accomplishing the tactical assignments of the Team/Task Force. The Leader directly manages the Team/Task Force and reports work progress, resource status, and other important information to the Division/Group supervisor, and maintains work records on assigned personnel.

- a. Review Site Safety Plan and assignments with subordinates and assign tasks.
- b. Monitor work progress and make changes when necessary.
- c. Coordinate activities with other Teams/Task Forces, and single resources.
- d. Submit situation and resource status information to Division/Group.

6. **AIR OPERATIONS BRANCH DIRECTOR:** The Air Operations Branch Director is responsible the safety of aircraft operations involved in response operations, and for preparing the air operations assignments for the IAP. Air operations planning will reflect agency restrictions that have an impact on the operational capability or utilization of resources such as night flying or hours per pilot. After the IAP is approved, the Air Operations Branch Director is responsible for implementing its strategic assignments that relate to the overall incident strategy as opposed to those that pertain to specific tactical operations. Additionally, the Air Operations Branch Director is responsible for providing logistical support to helicopters operating in response to the incident.

- a. Organize preliminary air operations.
- b. Request declaration or cancellation of restricted air space area.
- c. Participate in planning meetings and the preparation of the IAP.
- d. Perform operational planning for air operations.
- e. Prepare and provide Air Operations Summary Worksheet to the air support group and fixed wing bases.
- f. Determine coordination procedures for use by air organization with ground branches, divisions, or groups.
- g. Coordinate with Operations Section personnel.
- h. Supervise all air operations activities associated with the incident.
- i. Establish procedures for emergency reassignment of aircraft.
- j. Schedule approved flights of non-incident aircraft in the restricted air space area.
- k. Inform the Air Tactical Group Supervisor of the air traffic situation external to the incident.
- l. Resolve conflicts concerning non-incident aircraft.
- m. Update air operations plans.
- n. Report the Operations Section Chief on air operations activities.
- o. Arrange for accident investigation team when warranted.

7. **AIR TACTICAL GROUP SUPERVISOR:** The Air Tactical Group Supervisor is primarily responsible for the coordination and scheduling of aircraft operations in the area of response operations and report on the incident situation when fixed or rotary-wing aircraft are airborne at an incident. These coordination activities are performed by the Air Tactical Group Supervisor while airborne. The Air Tactical Group Supervisor reports to the Air Operations Branch Director and coordinates mission assignments, scheduling, and reports with the Situation Unit Leader.

- a. Check in and receive incident assignment, normally by radio.
- b. Determine what aircraft, fixed wing and helicopters, are operating within the area of assignments, and coordinate information with the Resource Unit.
- c. Manage air tactical activities based on the IAP.
- d. Establish and maintain communications with air operations, fixed wing and helicopter coordinators, air support group director, and fixed wing support bases.
- e. Coordinate approved flights on non-incident aircraft or non-tactical flights in the restricted air space area.
- f. Coordinate dispersant, in situ burning, bioremediation, or other air deliverable alternative response technology application through the Air Operations Branch Director.
- g. Obtain information about air traffic external to the incident.
- h. Receive reports of non-incident aircraft violating restricted air space area.
- i. Make tactical recommendations to the Operations Section Chief, Branch Director, or Division Supervisor.
- j. Inform Air Operations Branch Director of tactical recommendations affecting the IAP.
- k. Coordinate air surveillance mission scheduling and observer assignments with the Situation Unit Leader.
- l. Coordinate air surveillance observations and ensure reports are provided by the most direct methods available.

8. **HELICOPTER COORDINATOR:** The Helicopter Coordinator is responsible for the coordination of all tactical or logistical helicopter missions while in flight over the mission. The helicopter Coordinator is also responsible for the coordination and scheduling of helicopter operations intended to locate, observe, track, surveil, or report on the situation. The Helicopter Coordinator directs the application of dispersants, in situ burning, bioremediation, and air deliverable alternative response technology. The Helicopter Coordinator reports to the Air Tactical Group Supervisor and coordinates mission assignments and scheduling with the Situation Unit Leader.

- a. Confirm the type and quantity of aircraft, both fixed wing and helicopter, operating within the incident assignment area.
- b. Determine whether available helicopters are capable of accomplishing incident objectives.
- c. Identify and report potential hazards within the incident assignment area (other aircraft, ground hazards, landing zone hazards).
- d. Coordinate air traffic control procedures with pilots, Air Operations Branch Director, Air Tactical Group Supervisor, Fixed Wing Coordinator, and the Air Support Group.
- e. Coordinate the use of communication frequencies with the Air Tactical Supervisor and Incident Communications Unit.
- f. Assign and ensure use of appropriate operating frequencies by incident helicopters.
- g. Coordinate and make geographic assignments for helicopter operations with the Air Tactical Group Supervisor.
- h. Implement and monitor all safety requirements and procedures.
- i. Ensure that approved night flying procedures are being followed.
- j. Supervise all helicopter activities.

9. **FIXED WING COORDINATOR:** The Fixed Wing Coordinator is responsible for the coordination of

11. **RECOVERY AND PROTECTION BRANCH DIRECTOR:** The Recovery and Protection Branch Director is responsible for overseeing and implementing the protection, containment and cleanup activities established in the IAP. The Recovery and Protection Branch Director reports to the Operations Section Chief.

- a. Develop Operations portion of the IAP.
- b. Brief and assign operations personnel in accordance with the IAP.
- c. Supervise operations.
- d. Determine needs and request additional resources.
- e. Assemble and disassemble teams assigned to Operations Section.
- f. Report information about special activities, events, the situation, and the status of resources to the Operations Section Chief.
- g. Review the suggested list of resources to be released and initiate recommendations for the release of resources.

12. **PROTECTION GROUP SUPERVISOR:** The Protection Group Supervisor is responsible for the deployment of containment, diversion, and absorbing boom in designated locations. Depending on the size of the incident, the Protection Group may be further divided into teams, task forces, and single resources.

- a. Implement Protection Strategies assigned in the IAP.
- b. Direct, coordinate and assess effectiveness of protection actions.
- c. Modify protective actions as required by conditions on scene and inform the Recovery and Protection Branch Director of modifications required.

13. **ON WATER RECOVERY GROUP SUPERVISOR:** The On Water Recovery Group Supervisor is responsible for managing on water recovery operations as assigned in the IAP. The On Water Recovery Group may be further divided into teams, task forces, and single resources.

- a. Implement Recovery Strategies assigned in the IAP.
- b. Direct, coordinate, and assess effectiveness of recovery actions.
- c. Modify recovery actions as required by conditions on scene and inform the Recovery and Protection Branch Director of modifications required.

14. **SHORESIDE RECOVERY GROUP SUPERVISOR:** The Shoreside Recovery Group Supervisor is responsible for managing shoreside cleanup operations as assigned in the IAP. The Shoreside Recovery Group may be further divided into teams, task forces, and single resources.

- a. Implement recovery strategies assigned in the IAP.
- b. Direct, coordinate, and assess the effectiveness of recovery actions.
- c. Modify shoreside recovery actions as required by conditions on scene and report modifications to the Recovery and Protection Branch Director.

15. **DISPOSAL GROUP SUPERVISOR:** The Disposal Group Supervisor is responsible for coordinating the on site activities of personnel assigned to collecting, storing, transporting, and disposing waste materials. The Disposal Group may be further subdivided into teams, task forces, and single resources.

- a. Implement disposal actions assigned in the IAP.
- b. Ensure compliance with all hazardous waste laws and regulations.
- c. Maintain accurate records of recovered material.

16. **DECONTAMINATION GROUP SUPERVISOR:** The Decontamination Group Supervisor is responsible for the decontamination of personnel and response.
- Prepare and implement Decontamination Plan.
  - Direct and coordinate decontamination activities.
  - Ensure compliance with requirements of the Site Safety Plan and all hazardous waste laws and regulations.
17. **EMERGENCY RESPONSE BRANCH DIRECTOR:** The Emergency Response Branch Director is responsible for overseeing and implementing emergency measures to protect life, prevent further damage to the environment, and stabilize the situation, including Search and Rescue (SAR), Salvage and Lightering, Fire Suppression, Hazardous Materials (HAZMAT), and Emergency Medical Service (EMS).
- Develop Emergency Response sections of the IAP.
  - Brief and assign personnel in accordance with the IAP.
  - Supervise emergency response operations.
  - Assemble and disassemble teams/task forces assigned to the Emergency Response Branch.
  - Review suggested list of resources to be released and initiate recommendations for release of resources.
18. **SEARCH AND RESCUE (SAR) GROUP SUPERVISOR:** The SAR Group Supervisor is responsible for prioritization and coordination of all search and rescue missions directly related to a specific incident.
- Prioritize and assign SAR missions.
  - Direct and coordinate SAR missions.
  - Manage dedicated SAR resources assigned to the SAR Group.
19. **SALVAGE GROUP SUPERVISOR:** The Salvage Group Supervisor is responsible for coordinating and directing all salvage and lightering activities related to the incident.
- Coordinate development and review of the Salvage and Lightering Plan.
  - Direct and coordinate the implementation of the Salvage and Lightering Plan.
  - Manage dedicated Salvage Group resources.
20. **FIRE SUPPRESSION GROUP SUPERVISOR:** The Fire Suppression Group Supervisor is responsible for coordinating and directing all firefighting activities related to the incident.
- Prioritize responses to fires related to the incident.
  - Direct and coordinate fire suppression missions.
  - Manage dedicated Fire Suppression Group resources.
21. **HAZMAT GROUP SUPERVISOR:** The HAZMAT Group Supervisor is responsible for coordinating and directing all hazardous materials activities related to the incident.
- Prioritize HAZMAT responses related to the incident.
  - Direct and coordinate HAZMAT responses.
  - Manage dedicated HAZMAT Group resources.



22. **MEDICAL GROUP (EMS) SUPERVISOR:** The Medical Group Supervisor is responsible for coordinating and directing emergency medical services (EMS) related to the incident.
- a. Prioritize EMS responses related to the incident.
  - b. Direct and coordinate EMS responses.
  - c. Manage dedicated EMS Group resources.
23. **WILDLIFE BRANCH DIRECTOR:** The Wildlife Branch Director is responsible for minimizing wildlife losses during spill responses. The Wildlife Branch coordinates early aerial and ground reconnaissance of the wildlife at the incident site and reports survey result to the Situation Unit; employs wildlife hazing measures as authorized in the IAP; and supervises the rescue and rehabilitation of impacted wildlife. A central wildlife processing center should be identified and maintained for: triage, evidence tagging, transportation, veterinary services, treatment, rehabilitation, storage, and other support needs. The activities of private wildlife care groups, including those employed by the responsible party, shall be overseen and coordinated by the Wildlife Branch Director.
- a. Develop Wildlife Branch sections of the IAP.
  - b. Designate and coordinate the establishment of Wildlife treatment centers and field processing stations.
  - c. Supervise and direct Wildlife Branch operations.
  - d. Assemble and disassemble teams/task forces assigned to the Wildlife Branch.
  - e. Review suggested list of resources to be released and initiate recommendations for the release of resources.
24. **WILDLIFE RESCUE GROUP SUPERVISOR:** The Wildlife Rescue Group Supervisor is responsible for coordinating the search, collection, field tagging, and transportation to triage centers of both live and dead impacted wildlife. The Wildlife Rescue Group coordinates with the Situation Unit to conduct aerial and ground surveys of wildlife populations in the incident area. The Wildlife Recovery Group is also responsible for deploying and maintaining acoustic and visual hazing equipment as needed.
- a. Implement Wildlife Rescue and Hazing sections of the IAP.
  - b. Establish and implement protocols for collection and logging of impacted wildlife.
  - c. Coordinate triage and transportation of wildlife to processing stations.
25. **WILDLIFE REHABILITATION GROUP SUPERVISOR:** The Rehabilitation Group Supervisor is responsible for receiving oiled wildlife at field processing centers, providing immediate care, recording essential information, collecting necessary samples, and completing triage, stabilization, treatment, transport, and rehabilitation of impacted wildlife. The Wildlife Rehabilitation Group coordinates transportation to treatment centers for wildlife requiring extended care and treatment.
- a. Coordinate the designation and establishment of field processing station for impacted wildlife.
  - b. Process impacted wildlife and maintain logs.
  - c. Collect numbers/types/status of impacted wildlife and brief the Wildlife Branch Director.
  - d. Coordinate transportation of wildlife to extended care treatment centers.
  - e. Coordinate the release of recovered wildlife.
  - f. Coordinate the storage, documentation and disposition of deceased wildlife.

## **TAB D GENERAL STAFF: PLANNING SECTION**

1. PLANNING SECTION CHIEF: The Planning Section Chief is responsible for the collection, evaluation, dissemination and use of information about the development of the incident and the status of response resources. Information is needed to: 1) understand the current situation, 2) predict probable courses of incident events, and 3) prepare alternative strategies for the incident. The Planning Section Chief is directly responsible to coordinate the preparation and dissemination of the IAP for the next operational period.

- a. Activate and manage Planning Section Units.
- b. Reassign available personnel already on site to ICS organizational positions.
- c. Collect, process, and disseminate information about the incident.
- d. Supervise and coordinate the preparation and dissemination of the IAP.
- e. Provide input to the Incident Command and the Operations Section Chief in preparing the IAP.
- f. Establish information requirements and reporting schedules for all ICS organizational elements for use in preparing the IAP.
- g. Provide the Resource Unit with the Planning Section organization, including names and locations of assigned personnel.
- h. Assign Technical Specialists where needed.
- i. Assemble information on alternative strategies.
- j. Assemble and disassemble teams or task forces as needed.
- k. Identify need for use of specialized resources.
- l. Provide periodic forecasts of incident potential.
- m. Compile and display incident and resource status summary information.
- n. Provide status reports to authorized requestors.
- o. Advise the General Staff of changes in the incident situation.
- p. Incorporate the incident traffic plan (from Ground Support Unit) and other supporting plans into the Incident Action Plan.
- q. Prepare and distribute operational orders from the Unified Command.
- r. Supervise Planning Section units in the distribution and routing of incident information.
- s. Coordinate cooperating agency information collection and reporting requirements.
- t. Prepare recommendations for release of resources for submission to members of the Unified Command.

2. SITUATION UNIT LEADER: The Situation Unit Leader is responsible for the collection, evaluation, processing, and dissemination of current and possible future status of the spill and the response operations. This includes the compilation of information regarding the type and amount of oil spilled, the amount of oil recovered, the oil's current location and anticipated trajectory, and impacts on natural resources. This responsibility includes coordinating the creation of incident maps to depict the current and possible future situation and the preparation of reports for the Planning Section Chief.

- a. Assign duties and supervise Situation Unit personnel.
- b. Prepare and maintain Command Post incident displays and status boards.
- c. Collect incident information at earliest opportunity and continue for duration of incident.
- d. Prepare incident forecasts at periodic intervals or upon request of the Planning Section Chief.
- e. Prepare, post or disseminate resources and situation status information.
- f. Prepare the Incident Status Summary (ICS 209).
- g. Provide status reports to authorized requestors.
- i. Provide photographic services and maps.

3. **RESOURCE UNIT LEADER:** The Resource Unit Leader is responsible for maintaining the status of all resources (primary and support) at an incident. The Resource Unit develops, implements, and maintains a master list of all resources, including check-in, status, current location, and contact information. The Resource Unit provides resource status information for the IAP and is directly responsible to compile, copy and distribute the IAP, in coordination with all ICS organizational elements.

- a. Establish check-in function at incident locations and disseminate the list of check-in location to all assisting agencies.
- b. Provide resource status information and coordinate the maintenance of incident displays and status boards with the Situation Unit.
- c. Establish contacts with incident facilities to maintain current information on the status of resources.
- d. Gather, post, and maintain incident resource status.
- e. Maintain master roster of all resources checked-in at the incident.
- f. Prepare Organizational Assignment List (ICS 203) and Organization Chart (ICS 207).
- g. Provide resource status reports to authorized requesters.

4. **DOCUMENTATION UNIT LEADER:** The Documentation Unit Leader is responsible for the collection and maintenance of accurate, up-to-date incident files. Examples of incident documentation include: IAP, incident reports, communications logs, situation status reports, POLREPS, faxes, and unit logs. Documentation is essential to post-incident analysis and must be maintained and safeguarded throughout the incident. Coordination with all ICS organizational elements is required for complete documentation. The Documentation unit shall ensure that all ICS elements are maintaining and providing appropriate documentation. Incident files shall be stored for legal, analytical, and historical purposes. The Documentation Unit also provides duplication and copying services.

- a. Establish, organize, and maintain incident files.
- b. Establish duplication and copying service and respond to requests for copying support.
- c. File copies of all official forms, reports, and records.
- d. Check on the accuracy and completeness of records submitted for documentation and correct errors or omissions by coordinating with appropriate ICS elements.
- e. Provide copies of incident documentation to authorized requesters.

5. **DEMOBILIZATION UNIT LEADER:** The Demobilization Unit Leader is responsible for developing the Incident Demobilization Plan and assisting each organizational element ensure the orderly, safe, and cost effective demobilization of personnel and equipment.

- a. Review incident resource status records to determine probable size and scope of demobilization effort.
- b. Evaluate logistics and transportation capabilities required to support demobilization.
- c. Prepare and obtain approval of Demobilization Plan, including required decontamination procedures.
- d. Distribute Demobilization Plan to each processing point.
- e. Ensure that all organizational elements understand their responsibilities assigned in the Demobilization Plan.
- f. Monitor implementation and assist in the coordination of the Demobilization Plan.
- g. Coordinate resource status information with Resource Unit.



6. **TECHNICAL SPECIALISTS:** Technical Specialists are advisors with special skills needed to support the incident. Technical Specialists may be assigned anywhere in the ICS organization. If necessary, groups of Technical Specialists may be formed into a team, task force, or separate unit. The Planning Section will maintain a list of available Technical Specialists and assign where needed.

The following are example position descriptions for Technical Specialists that might be utilized during an oil spill response.

7. **SCIENTIFIC SUPPORT COORDINATOR:** The Scientific Support Coordinator (SSC), in accordance with the National Contingency Plan (NCP), serves as directed by the predesignated Federal On-Scene Coordinator (OSC). The SSC provides scientific advice with regard to the best course of action during a spill response. The SSC will obtain consensus from the Federal Natural Resource Trustee Agencies, provide spill trajectory analysis data, information on the resources at risk, weather information, tidal and current information, and information required to evaluate alternative response technology. The SSC will be the point of contact for the Scientific Support Team from NOAA's Hazardous Material Response and Assessment Division.

- a. Represent the OSC in planning meetings.
- b. Assign duties to members of the Scientific Support Team and supervise.
- c. Coordinate activation and assignment of Technical Specialists.
- d. Provide current and forecasted incident status information for the Situation Unit by way of over-flight maps and trajectory analysis.
- e. Provide weather, tidal and current information to the Incident Command.
- f. Obtain consensus from the Federal Natural Resource Trustees regarding response options and report to the OSC.
- g. Develop a prioritized list of resources at risk.
- h. Provide incident status reports to authorized requesters.

8. **GEOGRAPHIC INFORMATION SYSTEM (GIS) SPECIALISTS:** The GIS Specialists are responsible to gather and compile updated spill information and provide various map products to the incident. The GIS team will work for the Situation Unit and the Information Officer to ensure accurate and rapid dissemination of oil spill information to the ICS.

- a. Provide incident status reports to authorized requesters.

9. **RESOURCES AT RISK (RAR) TECHNICAL SPECIALISTS:** The Resources at Risk Technical Specialists are responsible for the identification of resources thought to be at risk from exposure to the spilled oil, through the analysis of known and anticipated oil movement and the location of natural, cultural, and economic resources. The Resources at Risk Technical Specialists consider the relative risk to develop a priority list for protection.

- a. Obtain current and forecast status information from the Situation Unit.
- b. Identify natural resources at risk.
- c. Identify socioeconomic and arcaeo-cultural resources at risk.
- d. Develop a prioritized list of the resources at risk for use by the Planning Section.
- e. Provide incident status reports to authorized requesters.

10. **SAMPLING SPECIALISTS:** The Sampling Specialists are responsible to provide a sampling plan for the coordinated collection, documentation, storage, transportation, and submittal to appropriate laboratories for the analysis or storage of samples collected at spill sites.

- a. Meet with Planning Section to develop initial sampling plan and strategy and review sampling and labeling procedures.
- b. Identify and alert appropriate laboratories.
- c. Set up site map to monitor location of samples collected and coordinate with GIS staff.
- d. Coordinate sampling activities with Scientific Support Coordinator, NRDA Representative, Investigation Team, and legal advisors.
- e. Provide sampling status reports to authorized requesters.

11. **DISPOSAL (WASTE MANAGEMENT) SPECIALISTS:** The Disposal (Waste Management) Specialists are responsible for providing the Planning Section Chief with a Disposal Plan that details the collection, sampling, monitoring, temporary storage, transportation, treatment, recycling and disposal of all anticipated response wastes.

- a. Develop a Pre-Cleanup plan to remove debris before an area is impacted by oil, and monitor pre-cleanup operations.
- b. Develop a detailed Waste Management Plan.
- c. Calculate and verify the volume of petroleum recovered, including petroleum collected with sediment, sand, debris, or other materials.
- d. Coordinate implementation of the Waste Management Plan with all of the organizational elements, particularly the Disposal Unit.
- e. Ensure proper management of oiled wildlife/carcasses in coordination with the Wildlife Rescue Unit and the Natural Resources Damage Assessment team.
- f. Provide disposal status reports to authorized requesters.

12. **ALTERNATIVE RESPONSE TECHNOLOGY (ART) SPECIALISTS:** The Alternative Response Technology Specialists are responsible for evaluating the opportunities to use ART, including dispersants or other chemical counter measures. in situ burning, and bioremediation. The ART specialists will conduct the consultation and planning to deploy a specific ART, and articulate the environmental trade-offs of using or not using a specific ART.

- a. Gather data pertaining to the spill including spill location, type and amount of petroleum spilled, physical and chemical properties, weather and sea conditions, and resources at risk.
- b. Identify available ARTs that may be effective on the specific spilled petroleum.
- c. Make initial notification to all agencies that have authority over the use of ARTs.
- d. Keep the Unified Command and Scientific Support Coordinator informed of ART issues.
- e. Provide ART status reports to authorized requesters.

13. **RESPONDER TRAINING SPECIALISTS:** The Responder Training Specialists ensures development and implementation of training plans, monitors operational procedures, and evaluates training needs.

- a. Develop responder training plans and review proposed training assignments.
- b. Coordinate status of trainees with the Resource Unit.
- c. Evaluate the need for 4 hour HAZWOPER training for convergent volunteers.
- d. Monitor operational procedures and evaluate training needs.
- e. Provide training status reports to authorized requesters.

14. **NRDA REPRESENTATIVE:** The NRDA Representative is responsible for coordinating NRDA needs and activities of the trustee NRDA Teams with the ICS spill response operations. This includes close coordination with the Planning Section for obtaining timely information on the spill and injuries to natural resources. The NRDA Representative will coordinate with the Scientific Support Coordinator, the RP and Legal specialists for possible coordination of NRDA or injury determination activities.

- a. Attend appropriate planning meetings to facilitate communication between NRDA Team and ICS elements.
- b. Identify site access, transportation support, logistics requirements and staffing needs to the proper ICS elements.
- c. Interact with ICS elements to collect information essential to d. Coordinate sampling requirements with Sampling Specialists and the Situation Unit.
- e. Coordinate with the Liaison Officer and the SSC to identify other organizations available to support NRDA activities.
- f. Ensure that NRDA activities do not interfere or conflict with response objectives.

15. **INVESTIGATION SPECIALISTS:** The Investigation Specialists report directly to their respective Incident Commanders. Both Federal and State investigative teams will coordinate their investigations within legal discovery guidelines. The Investigative Specialists operate as separate entities during the incident and are not normally part of the ICS. Investigation information may be provided to support the ICS, within legal guidelines.

- a. Coordinate investigative activities with Legal Specialists, NRDA Representative, and Sampling Specialists.
- b. Contact and coordinate with other response agencies already on scene (USCG, OSPR, State Lands, Harbor Patrol, Police, Lifeguards).
- c. Provide response essential information (amount of product discharged, location and nature of the source, health and safety hazards identified) developed as part of the investigation in support the Unified Command.
- d. Complete investigation report and file with the appropriate jurisdiction.

16. **LEGAL SPECIALISTS:** The Legal specialists will act in an advisory capacity during an incident. Legal Specialists normally act as counsel to their respective organizations and report directly to their respective Incident Commanders. Legal Specialists operate as separate entities during the incident and are not normally part of the ICS organizational structure.

- a. Participate in planning meetings, if requested.
- b. After the initial investigation is complete, the Legal specialists should direct activities toward the implementation of the NRDA procedure.
- c. Provide legal advise as required.

## **TABLE GENERAL STAFF: LOGISTICS SECTION**

1. **LOGISTICS SECTION CHIEF:** The Logistics Section Chief is responsible for providing facilities, services, and material in support of the incident. The Logistics Section Chief participates in development and implementation of the Incident Action Plan and activates and supervises Branches and Units within the Logistics Section.
  - a. Plan, activate, and manage the organization of the Logistics Section.
  - b. Assemble and brief Branch Directors and Unit Leaders.
  - c. Provide Logistics Section staffing and watch list to Resource Unit.
  - d. Participate in preparation of the IAP.
  - e. Identify facilities, services, and support requirements for planned and expected operations.
  - f. Provide input to and review Communications Plan, Medical Plan, and Traffic Plan.
  - g. Coordinate and process requests for additional resources.
  - h. Review IAP and anticipate Logistics Section needs for the next operational period.
  - i. Advise on current and anticipated service and support capabilities.
  - j. Ensure general welfare and safety of Logistics Section personnel.
2. **SERVICE BRANCH DIRECTOR:** The Service Branch Director is responsible for the management of all service activities at the incident. The Service Branch Director supervises the operation of the Communications, Medical, and Food Units.
  - a. Determine the level of services required to support incident operations.
  - b. Organize and manage assignments for Service Branch Units.
3. **COMMUNICATIONS UNIT LEADER:** The Communications Unit Leader is responsible for developing plans for the effective use of incident communications equipment and facilities; installing and testing of communications equipment; supervision of the Incident Communications Center; distribution of communications equipment to incident personnel, and the maintenance and repair of communications equipment.
  - a. Prepare and implement the Incident Communications Plan (ICS 205).
  - b. Ensure the Incident Communications Center and Message Center are established.
  - c. Set up telephones and public address systems.
  - d. Establish appropriate communications distribution and maintenance locations.
  - e. Ensure communications systems are installed and tested and respond to communications trouble reports.
  - f. Ensure an equipment accountability system is established.
  - g. Ensure personal portable radio equipment is distributed per Communications Plan.
  - h. Provide Technical Information as required on:
    - Adequacy of communications systems currently in operation;
    - Geographic limitations on communications systems;
    - Equipment capabilities;
    - Amount and types of equipment available; - Anticipated problems in the use of communications equipment.
4. **MEDICAL UNIT LEADER:** The Medical Unit Leader is responsible for the development of the Medical Emergency Plan, obtains medical aid and transportation for injured or ill incident personnel, and prepares medical reports and records for the incident. The Medical Unit may also assist Operations in

supplying medical care and assistance to civilian casualties at the incident, but is not intended to provide medical services to the public.

- a. Determine level of emergency medical activities performed prior to activation of the Medical Unit.
- b. Prepare the Emergency Medical Plan (ICS 206).
- c. Respond to requests for medical aid.
- d. Respond to requests for medical transportation.
- e. Respond to requests for medical supplies.
- f. Evaluate the need to pre-position Medical Unit resources at staging areas or other operational sites.
- g. Prepare procedures for major medical emergency.
- h. Declare major medical emergency as appropriate.

5. **FOOD UNIT LEADER:** The Food Unit Leader is responsible for determining feeding requirements at all incident facilities; menu planning; determining cooking facilities required; food preparation; serving; providing potable water; and general sanitation and maintenance of the food service areas.

- a. Determine location of work assignments and the number and location of personnel to be fed.
- b. Determine the method and schedule of feeding to best fit operational requirements.
- c. Obtain necessary equipment and supplies to operate food service facilities.
- d. Set up Food Unit equipment.
- e. Prepare menus to ensure incident personnel receive well balanced meals.
- f. Ensure that sufficient potable water is available to meet all incident needs.
- g. Ensure all appropriate health and safety measures are taken.
- h. Supervise cooks and other Food Unit personnel.
- i. Keep inventory of food on hand and check-in food orders.
- j. Provide Supply Unit Leader with food supply orders.

6. **SUPPORT BRANCH DIRECTOR:** The Support Branch Director is responsible for development and implementation of logistics plans in support of the IAP, including; providing personnel, equipment, facilities, transportation and supplies to support incident operations. The Support Branch Director supervises the operation of the Supply, Facilities, and Transportation Units.

- a. Determine initial support operations requirements in coordination with the Logistics Section Chief and the Service Branch Director.
- b. Participate in the development of and review the IAP to ensure required support is in place.
- c. Resolve problems with support requests from other Sections.

7. **SUPPLY UNIT LEADER:** The Supply Unit Leader is responsible for ordering personnel, equipment, and supplies; receiving, storing, and issuing all supplies for the incident; and servicing non-expendable supplies and equipment.

- a. Provide initial response Kits to Planning, Logistics, and Finance sections.
- b. Determine type and amount of supplies enroute.
- c. Receive and respond to requests for personnel, supplies, and equipment.
- e. Order, receive, maintain inventory lists, store, and distribute supplies and equipment.
- f. Review the IAP for assignments which require Supply Unit support.
- g. Coordinate resource orders and contracts with the Finance Section.

- h. Coordinate service of reusable equipment.

8. **PERSONNEL MANAGER:** The Personnel Manager coordinates and documents ordering and assignment of personnel to meet incident requirements. The Personnel Manager processes requests for additional personnel and paperwork for arriving employees; plans, documents, coordinates in-briefings, and accounts for response assignments for individuals, agencies, teams, and commercial resources. The Personnel Manager coordinates with the Resource Unit to track the status and processing of incident personnel assignments, including emergency response workers; and identifies resources needed to support the use of volunteers.

- a. Coordinate with Resource Status Unit to document status and assignments of incident personnel.
- b. Respond to and process requests for additional personnel.
- c. Process all arriving employees.
- d. Coordinate initial in-briefings, including initial safety briefings for all arriving personnel.
- e. Document and account for incident assignments for individuals, agencies, teams, and commercial resources.
- f. Coordinate resources needed to support the processing and assignment of volunteers.



9. EQUIPMENT/MATERIALS MANAGER: The Equipment and Materials Manager is responsible for processing equipment and materials requests, locating and negotiating delivery of equipment and materials, monitoring supply levels and costs, and reporting these to the Supply Unit Leader.

- a. Respond to requests for equipment and materials by coordinating the ordering, delivery, storage, and distribution of equipment and materials.
- b. Report changes in equipment status and inventory levels to the Resource Unit.
- c. Locate sources of supply for ordered equipment and materials and coordinate ordering and delivery with the Finance Section.
- d. Provide secure storage and protection of equipment and materials before they are issued to the incident.
- e. Coordinate equipment support and servicing of reusable equipment.

10. FACILITIES UNIT LEADER: The Facilities Unit Leader is responsible for the activation and layout of incident facilities. Incident facilities may include the Incident Command Post, Bases, Camps, Staging Areas, or special function facilities, such as Wildlife Rehabilitation Centers. The Facilities Unit provides sleeping and sanitation facilities, as required, for incident personnel and manages base and camp operations. Each facility, base, or camp is assigned a manager who reports to the Facilities Unit Leader and is responsible for managing the operation of the facility. The basic functions of Base or Camp managers are to provide or coordinate security service and general maintenance. The Facilities Unit Leader reports to the Support Branch Director.

- a. Determine requirements for each facility to be established in accordance with the IAP.
- b. Ensure all requirements for the Incident Command Post are anticipated, approved, and completed.
- c. Prepare layouts, maps, and support requirements for all incident facilities.
- d. Assign Base and Camp Managers.
- e. Provide sleeping facilities for incident personnel.
- f. Provide and coordinate security services.
- g. Provide facilities maintenance services including sanitation, lighting, and cleanup.
- h. Obtain personnel to operate facilities.

11. GROUND SUPPORT UNIT LEADER: The Ground Support Unit Leader is responsible for coordination of transportation of personnel, supplies, food, and equipment; fueling, service, maintenance and repair of vehicles and other ground support equipment; support of out of service resources; and implementation of the Incident Traffic Plan.

- a. Coordinate development of the Traffic Plan with the Planning Section.
- b. Notify Resource Unit of all status changes of support and transportation vehicles.
- c. Respond to and coordinate transportation requests for incident personnel, supplies, food, and equipment.
- d. Arrange for and activate fueling, maintenance, and repair of ground transportation resources.
- e. Maintain inventory of support and transportation vehicles (ICS 218)
- f. Collect usage information on rented equipment.
- g. Requisition maintenance and repair supplies including fuel, spare parts, and safety equipment.
- h. Coordinate the maintenance of incident roads.
- i. Obtain personnel to operate and service ground support unit equipment and vehicles, including duty drivers and motor pool support personnel.



12. **TRANSPORTATION MANAGER:** The Transportation Manager is responsible to coordinate transportation services for incident personnel, equipment, and supplies. The Transportation Manager is the central coordinating point for incident transportation requirements and may coordinate transportation using all available methods, including ground, water, and air. The Transportation Manager is responsible to match transportation needs with available modes of transportation.

- a. Coordinate incident transportation needs with sources and methods of transportation.
- b. Maintain a prioritized list of transportation needs and coordinate transportation schedules and assignments.
- c. Coordinate land transportation assignments with the Ground Transportation Unit.
- d. Coordinate vessel transportation requirements with the Operations Section or other sources of vessel transportation.
- e. Coordinate air transportation assignments with the Air Operations Branch or other sources of air transportation.

**TAB F GENERAL STAFF: FINANCE SECTION**

1. **FINANCE SECTION CHIEF:** The Finance Section Chief is responsible for all financial and cost analysis of the incident and for supervising members of the Finance Section.

- a. Develop an operating plan for Finance Section functions at the incident.
- b. Provide input in all planning sessions on financial and cost analysis matters.

- c. Maintain daily contact with agency(s) administrative headquarters on financial matters.
- d. Ensure that all personnel time records are transmitted to home agencies according to policy.
- e. Ensure that all obligation documents and contracts initiated at the incident are properly prepared and completed.
- f. Brief agency administration personnel on all incident related business management issues needing attention and follow-up prior to departing the incident.

2. **TIME UNIT LEADER:** The Time Unit Leader is responsible for recording personnel and equipment time and status information for cost documentation and payroll purposes. The Time Unit coordinates with the Resource Unit to ensure the accurate accounting of personnel and equipment time and status information.

- a. Determine incident requirements for Time Recording functions.
- b. Establish contact with appropriate agency personnel representatives to ensure proper time accounting is reported.
- c. Ensure daily personnel time recording documents are completed and compliance to time policy is met.
- d. Submit cost estimate data forms to Cost Unit as required.
- e. Provide for records security.
- f. Establish commissary operation as required.
- g. Brief Finance Section Chief on current problems, recommendations, outstanding issues, and follow-up requirements.

3. **PERSONNEL TIME RECORDER:** The Personnel Time Recorder reports to the Time Unit Leader and records personnel information.

- a. Establish and maintain a file for personnel time reports within the first operational period.
- b. Initiate, gather, or update a time report from all applicable personnel assigned to the incident for each operational period.
- c. Ensure all personnel identification information is verified to be correct on the time report.
- d. Post personnel travel and work hours, transfers, promotions, specific pay provisions, and terminations to personnel time documents.
- e. Ensure that time reports are signed.
- f. Close out time documents prior to personnel leaving the incident.
- g. Distribute all time documents according to agency policy.
- h. Maintain a log of excessive hours worked and give to Time Unit Leader daily.

4. **PROCUREMENT UNIT LEADER:** The Procurement Unit Leader is responsible for administering all financial matters pertaining to vendor contracts.

- a. Obtain or develop incident Procurement Plan.
- b. Prepare and sign contracts and land use agreements as needed.
- c. Respond to requests for procurement of equipment, supplies, personnel, or services.
- d. Coordinate with local jurisdictions on plans and supply sources.
- e. Draft memoranda of understanding with cooperating and assisting agencies.
- f. Interpret contracts/agreements and resolve vendor claims or disputes within delegated authority.
- g. Receive and coordinate replies to vendor offers of equipment, supplies, personnel, or services.
- h. Coordinate use of imprest funds as required.
- i. Finalize all agreements and contracts.

- j. Coordinate with Compensation/Claims Unit on procedures for handling claims.
- k. Complete final processing and send documents for payment.
- l. Coordinate cost data in contracts with Cost Unit Leader.

5. **COMPENSATION/CLAIMS UNIT LEADER:** The Compensation/Claims Unit Leader is responsible for the overall management and direction of all Compensation for Injury Specialists and Claims Specialists assigned to the incident.

- a. Determine the need for Compensation for Injury and Claims Specialists and other personnel.
- b. Establish Compensation for Injury work area with Medical unit whenever possible.
- c. Obtain a copy of the IAP and the Incident Medical Plan.
- d. Evaluate the need to advertise claims procedures, the need for 1-800 public information services, and the need for public claims processing centers.
- e. Coordinate with Procurement Unit on procedures for handling claims.
- f. Periodically review all logs and forms produced by Compensation/Claims Specialists to ensure:
  - Work is complete;
  - Entries are accurate and timely;
  - Work is in compliance with Agency requirements and policies.
- g. Coordinate claims information with NRDA liaison representative.
- h. Ensure that all Compensation for Injury and Claims Logs and Forms are up to date and routed to the proper agency for post incident processing prior to demobilization.

6. **COST UNIT LEADER:** The Cost Unit Leader is responsible for collecting all cost documentation, performing cost effectiveness analyses, and providing cost estimates and cost saving recommendations for the incident.

- a. Coordinate with agency headquarters on cost reporting procedures.
- b. Obtain and record all daily cost documentation.
- c. Prepare daily incident cost summaries.
- d. Prepare resource-use cost estimates for Planning.
- e. Prepare incident cost estimates and projections.
- f. Make recommendations for cost savings to Finance Section Chief.
- g. Maintain cumulative incident cost records.
- h. Ensure that all cost documentation records are accurately prepared, processed, and maintained.)
- i. Complete all cost documentation prior to demobilization.

#### **TAB G MULTI-AGENCY COORDINATION GROUP (MACV)**

Local government will fill key roles where appropriate within the Incident Command System, in both the Command Staff (Public Information, Liaison, and Safety) and the General Staff (Operations, Planning, Logistics and Finance).

The attached charts show the roles of local government in incident specific situations as it relates to the actual Unified Command block. As these charts make clear, only in the case of an incident involving ONLY an oil spill response and/or cleanup, will local government be an ongoing full participant in the Unified Command block. Under all circumstances, including oil spill response and/or cleanup, local government will be integrated pursuant to a MOU which is consistent with the Area Contingency Plan and Local Contingency Plan.

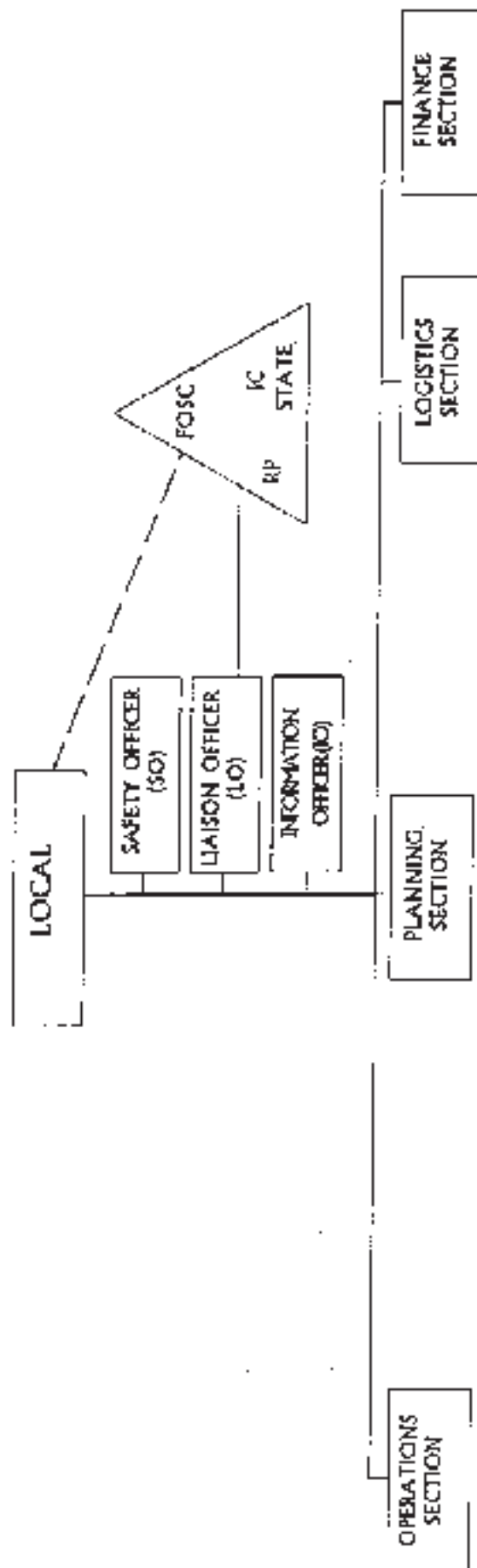
In a oil spill response and/or cleanup not directly impacting local jurisdictional issues, local government through their agency representative will fill appropriate positions in the Incident Command System; however, where local government jurisdiction issues are involved (such as beach closures), the local government will be in the Unified Command block for those jurisdictional issues.

A multi-agency coordination group (MAC) will also be established to incorporate all affected agencies into a cohesive group to aid in the overall response, facilitate briefings and issue sharing during a response. Local officials will have direct input and share information with the State Incident Commander and the Administrator on an ongoing basis through this group. The MAC will be established at the time of the incident and will be coordinated through the Liaison Officer and the agency representative.

Local government has previously integrated their concern through the Area Planning process. Local priorities, in areas such as economic and environmental protection strategies, are integrated into the Area Plan and become priorities to which both the State and Federal governments are committed to insure full protection of vital local interests.

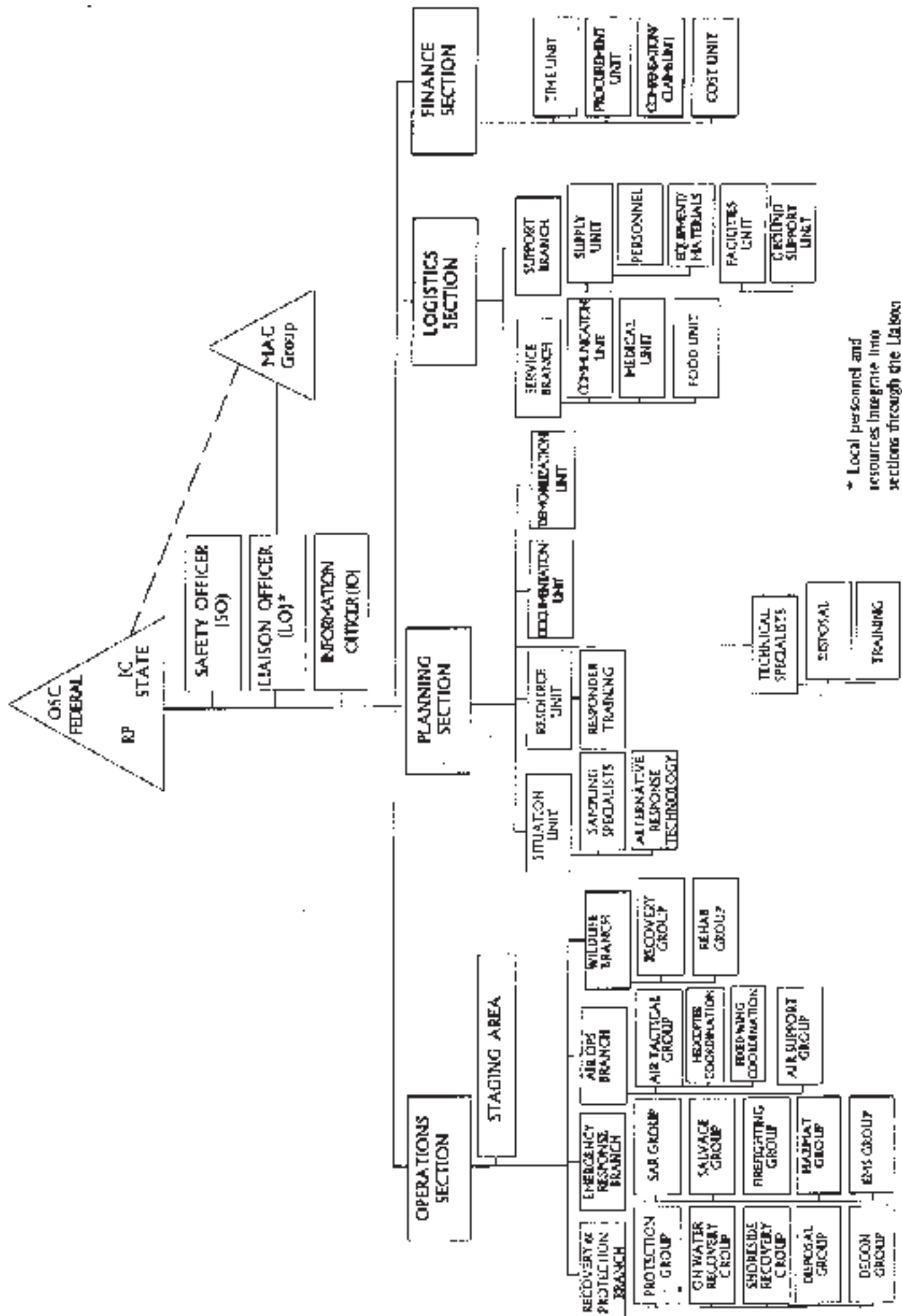
The Office of Oil Spill Prevention and Response is in the process of working on MOUs with each local agency who has received grants and has participated in the process. This process should resolve any remaining issues relative to local government integration into a Incident Command System structure during a time of an incident which involves an oil spill.

# Unified Command Structure / Incident Command System for Health and Safety Response Issues (e.g., fire, HAZMAT, vapor clouds, and/or evacuation)



The State IC moves up to the local command role when the response exceeds the local capability (e.g., Cantara Spill).

# Unified Command Structure / Incident Command System for Oil Spill Clean-up



# Annex C

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## **ANNEX C OPERATIONAL ADMINISTRATION**

### **APPENDIX I SPILL FUNDING PROCEDURES**

#### **TAB A DOCUMENTATION AND COST RECOVERY PROCEDURES**

The Oil Pollution Act of 1990 established the Oil Spill Liability Trust Fund (OSLTF) authorizing payment of removal costs, including the costs of monitoring removal actions that are consistent with the National Contingency Plan. Responsible parties are normally held liable for all damages and costs incurred as a result of an oil spill. Expenses must be properly documented to provide the responsible party with an accurate accounting of payments due.

The National Pollution Funds Center (NPFC) publication “Technical Operating Procedures for Resource Documentation under The Oil Pollution Act of 1990”, dated January 1993, details the specific policy, procedures and forms required when using of the Oil Spill Liability Trust Fund (OSLTF). NPFC provides funding to various environmental response organizations for timely abatement and removal activities related to oil spills; furthermore, with the help of Dept. of Justice, they recover the costs of removal activities or damages from those responsible for oil pollution incidents.

This manual can be used to assist the OSC with answers to any questions which might arise during an incident; furthermore, all required forms and reports in relation to oil spill funding are contained in this manual. A copy of this manual can be obtained by contacting the CGDELEVEN (m) office at 310/980-4300 (X) 280.

**The State of California’s lead agency in responding to oil spills in marine waters is the Department of Fish and Game’s Office of Oil Spill Prevention and Response (OSPR). OSPR can provide to other state agencies and local governments information relating to the administration of Oil Spill Response Trust Fund and cost recovery. The fund can be used to cover promptly the cost of response, containment and cleanup of oil spill into marine waters. In addition, the OSPR can recover response costs or damages from responsible parties with the Attorney General’s assistance.**

Some important key players for the OSC when discussing spill funding procedures are the Case Officer and the Contracting Officer. Their roles in a removal action and the support they can provide to the OSC are as follows:

Case Officer - NPFC assigns a Case Officer to each pollution case. The Case Officer provides the continuity needed to pursue cost recovery; he or she is the one mind that pays attention to the entire case, not just a specific part of it. The Case Officer teams up with a financial management specialist and a claims specialists to gain what is needed to move forward with the case. Any questions which might arise can be directed to the Case Officer for answers, this will eliminate any external demands from the OSC and allow him or her to concentrate on their primary duty, removal. The Case Officer will come out to the scene when specifically requested by the OSC. This can be accomplished by either calling NPFC directly via the National Response Center (NRC) at (800) 424-8802, or the request can be made via POLREP. Additional information is also provided throughout this appendix.

Contracting Officer - The Contracting Officer can provided expertise in the area of contracting for supplies and/or services in excess of \$25,000.00. Also, he or she has technical expertise in issuance of Basic Ordering Agreements (BOA) and non-BOA’s. Any questions which might arise during a removal

activity can be addressed to the Contracting Officer by either contacting them during normal working hours at (510) 437-5915, or after working hours they can be reached by calling the Communications Center (COMMCEN) at (510) 437-3673. COMMCEN will then contact the duty Contracting Officer and inform them of the request for assistance.

Important key players for the OSPR when discussing funding procedures are the Finance Chief, Logistics Chief, and State and Local Agency Liaison Officer. Their roles in a response action and the support they can provide to the OSC are as follows:

Finance Chief - Is responsible for all of the state's financial and cost analysis aspects of an incident and for supervising members of the Financial Section. He/she will take the lead in making contact with the responsible party or case officer to address pursuing cost recovery. The Finance Chief will also work with OSPR's Logistics Chief and Liaison Officer regarding personnel, equipment, contractors, etc.

Logistics Chief - Is responsible for communications, procurement of equipment, commissary needs; coordinating contracts for supplies and services. He/she will take the lead and make contact with the responsible party or the OSC's contracting officer; and, has the technical expertise in contracting and procurement through the state's system.

State and Local Agency Liaison Officer - Is responsible for check-in of other state agencies and local governments. He/she will work with the Finance Chief in providing assistance on assignments and cost recovery.

Properly completed resource documentation provides for timely reimbursement/payment to federal, state, other government agencies, and contractors involved in the incident activities. This resource documentation should be completed as close to the time of activity as possible. When completed, the resource documentation should provide a complete and adequate audit trail for internal and external auditors so that compliance with applicable regulations, guidelines, and procedures can be verified.

Although complying with all of these documentation requirements can become complex, two methods have been identified by (NPFC) to help ease the burden of documentation:

1. The Pollution Incident Daily Resource Reporting System (PIDRRS)
2. An NPFC approved alternate record keeping system

The (PIDRRS) is a series of forms, instructions, and submission schedules used to document costs associated with removal activities under OPA. It is based on the use of Standard Rates for any particular agency or contractor. The standard rate is a published rate for any particular service, action or product. These published rates include as part of the costs medical coverage, training, retirement and other fringe benefits. Other costs built into the rates are the costs for shop towels, tools, their supervisors, and some include administrative support as part of the cost.

The Coast Guard has adopted standard rates which are published in Commandant Instruction 7310.1 series. For all Coast Guard Units, the standard rates will be used. Other government agencies normally have a similar standard rate system, but in the event they don't, the Coast Guard standard rate instruction has GS levels that parallel the military ranking system for personnel rates.

Contractors will use the rates established in their Basic Ordering Agreement (BOA), or as agreed to with the Contracting Officer on a case by case basis. Any charges above and beyond those specifically listed in the (BOA) are to be referred to the Contracting Officer located at MLCPAC. Also, (BOA) contractors must use the (PIDRRS) unless their method of documentation was pre-approved by the MLCPAC Contracting Officer.

An NPFC approved alternate record keeping system for government and state agencies, must be an existing system for documenting activities and costs associated with removal under OPA. Alternate systems will be approved by the NPFC in a timely fashion.

For resource documentation purposes, a three level system has been developed to help distinguish between routine incidents from the more complex cases. The OSC determines which level best applies to each incident. The following criteria is designed to assist the OSC in making this determination:

Level I - Routine

A routine incident is one where total costs to the government will not exceed \$50,000.00

Level II - Moderately Complex

A moderate incident could be defined as one where the total costs are between \$50,000.00 and \$200,000.00.

Level III - Significantly Complex

A significantly complex incident differs from a moderate incident in the total costs which exceed \$200,000.00.

OSC resource documentation procedures have changed dramatically from the old way of doing business. With the incorporation of the three level system, the OSC responsibility shifts from being ultimately responsible for verifying each and every cent expended, to only verifying that the work or services were in fact authorized and received. Although this does not relieve the OSC from the responsibility of ensuring that ceiling costs aren't exceeded, it does help ease the burden of auditing each cost; furthermore, the OSC can now shift the manpower resources from cost documentation to the field where it's needed most. Below are some general guidelines pertaining to the OSC's responsibility for resource documentation in each level.

Level I

The OSC is required to monitor the daily activities of other government agencies and contractors involved in removal activities; however, the other government agencies and contractors aren't required to submit resource documentation on a daily basis. After the removal activities have ended, the other government agencies and contractors will submit their resource documentation in a timely manner and in the correct format to the OSC.

Level II

In a level II case, other government agencies and contractors are responsible for preparing and submitting resource documentation to the OSC on a daily basis and in the correct format.

This documentation must be verified daily by the OSC as to authorized activities.

### Level III

The OSC responsibilities are the same as the level II case; however, because of the complexity of these cases, the OSC may request contracted personnel to prepare the actual resource documentation.

In each level listed, the other government agencies and contractors are responsible for submitting their invoices on a timely basis. Other government agencies should submit an SF-1080 and the contractors use their normal invoicing procedures. The OSC should review resource documentation submitted by each response agency, compare the daily resource documentation against the SF-1080's and invoices, and certify the documentation as to the receipt of services reflected on the documentation.

Further guidance on the (PIDRRS) is provided at the end of this tab in the form of a Technical Operating Procedures (TOPS) excerpt. This information will include the actual forms to be used, such as the SF 1080's.

#### **TAB B OSC ACCESS TO THE FUND**

The OSC requests via phone call, an issuance of a Federal Project Number (FPN) and a corresponding ceiling authorization from CCGD11 Marine Safety Division at 310/980-4300 (X280). If the call is after working hours, the division duty officer can be reached by calling the District Operations Center (OPCEN) at 310/980-4400. The OPCEN will then contact the Duty Officer and inform him/her of the request. A request via message to the Marine Safety Division must follow the phone conversation as soon as possible. Once the duty officer is contacted, he or she will call you back with the following questions:

1. The name of all known vessels and/or facilities involved.
2. Substance spilled and estimated amount (if known).
3. The source of the discharge or substantial threat of discharge.
4. The responsible party (if known).
5. The location and date of the discharge.
6. The identification of the body of water impacted or threatened
7. The initial ceiling amount requested for obligation under the appropriate FPN.
8. The planned obligations under this FPN (ie. EPA/ERT costs).
9. The cleanup contractor(s) selected (if any).

Once the questions have been addressed, the FPN is then issued and a ceiling established; furthermore, the Marine Safety Division will follow up by message the confirmation of the FPN and ceiling. These procedures shall continue to be followed if it appears that costs are going to be higher than originally estimated, and the OSC anticipates a request for an increase to the ceiling.

All Pollution Reports (POLREPS) and other messages related to the incident where the fund has been accessed shall include the OSC, NPFC, FINCEN, and the MLC PAC Contracting Officer as info addressees, in addition to current reporting requirements.

If no funding has been expended against an FPN for response/removal, the OSC shall notify the Marine Safety Division duty officer. The Marine Safety Division will then deactivate the FPN, and notify the appropriate offices via message of the deactivation.

The OSC shall ensure that obligations from the fund remain within the established ceiling, and if necessary, promptly requests ceiling increases from the Marine Safety Division.

All purchases, contracts, services, and authorizations of activity have costs which must be applied against the ceiling. Each contractor or agency is responsible to keep track of their costs during the removal and to stay inside the ceiling given them by the OSC or request more if needed.

In keeping track of the ceiling, the OSC must remember to subtract all known costs, such as purchase orders, credit card purchases. These are easy to track due to their exact costs at the time of purchase. Also, subtract all obligations against the ceiling. These include contracts with other government agencies and contractors. Finally, all estimated costs such as travel orders should also be tracked. This can be accomplished by using the estimated travel costs on each individual travel order.

Once the pollution fund is opened, the OSC has authority to make open market purchase obligations up to \$25,000 per transaction for supplies and \$2,000 for services. These transactions supplement, as needed, the supplies and services provided by the primary cleanup contractor.

A contractor which has a Basic Ordering Agreement (BOA) established must be selected over one that has none except as noted below. BOA contractors are initially hired by verbal order, followed by an Authorization to Proceed (ATP) or written contract Optional Form 347 (OF-347) for each incident. Direction must include the specific number of personnel, equipment needed, estimated cost, and the FPN noted on the form. The OSC authorized spending ceiling for a BOA contractor is set at \$25,000 per incident, per BOA contractor selected (ie. two BOA contractors can be hired to perform different tasks on one incident at a maximum of \$25,000 each). In the event the costs for BOA contractor services will exceed the OSC's limit, the MLC PAC Contracting Officer must be called immediately for further contracting actions.

When the BOA contractor cannot provide a timely and/or adequate response, selection of a non-BOA contractor is authorized. The Contracting Officer is the only person that is authorized to contract for non-BOA contractors. If the appropriate Contracting Officer cannot be reached in a timely manner, the OSC is authorized to issue non-BOA purchase orders, on an emergency basis only, with a limit not to exceed \$25,000 per incident. The OSC must contact the Contracting Officer within twenty-four hours after exercising this emergency authority.

If the OSC determines that another agency (federal, state, local, or Indian tribe) can assist in a removal effort, the OSC may authorize that agency to perform removal actions. The OSC must then complete a Pollution Removal Funding Authorization (PRFA) which specifies who is authorized to do what, when, and for how much.

Contractors shall submit original invoices to the OSC as required, and mail copies of the invoices to the Finance Center. After review, the OSC will certify and mail the invoices with dailies to the MLC Contracting Officer for approval. After the Contracting Officer compares the two invoices, they will be mailed to the Finance Center for payment.

In the event that a state or local government agency is authorized to perform removal actions, the State of California, Office of Oil Spill Prevention and Response (OSPR) will function as finance liaison with the federal government.

If federal funds are not available or will not be available in an adequate period of time, and a responsible party does not exist or is unable or unwilling to provide adequate and timely cleanup and to pay for the damages



The OSC must report the costs of all obligations on POLREPS in the following categories:

1. The authorized ceiling for the case.
2. Cumulative financial obligations to date (including the cost limits set in: contracts, inter-agency agreements, delivery orders, purchase orders, travel orders, MIPR's, etc).

The following accounting string is to be used on each case once given authorization to do so by the OSC. The intention behind using a standard accounting string, is to alleviate the unit's from using their OG-30 accounts, and then seeking reimbursement from the fund at a later date. It is to the units advantage to use this to the maximum extent possible, but as a reminder, the OSC must authorize the expenditure.

2/H/SZ/111/95/0/FPN/OPFAC/####

FPN - Federal Project Number that is issued by the Marine Safety Division to the OSC.

#### - object code

- 2100 domestic site visit/operational
- 2110 overseas site visit/operational
- 2204 truck rental
- 2211 transportation of Gov't owned property (i.e. VOSS)
- 2521 contractual services (DOD)
- 2522 contractual services (Other Govt Agencies)
- 2523 contractual services (other)
- 2662 supplies and materials

Further guidance on the (PIDRRS) is provided at the end of this tab in the form of a Technical Operating Procedures (TOPS) excerpt. This information will include the actual forms to be used, such as government personnel and equipment; contractor personnel and equipment; filling out the SF 1080's and PRFA's.

### **TAB C STATE ACCESS TO THE FUND**

The following procedures are excerpts from the National Pollution Funds Center's Technical Operation Procedures (TOPS) for State Access to the Fund. A full copy of the TOPS instruction can be obtained by contacting the Eleventh Coast Guard District Office at phone number 310/980-4300 (X280).

Section 1012(d)(1) of the Oil Pollution Act of 1990 provides that the President, upon request of the Governor of a State or his or her designated state official, may obligate the Oil Spill Liability Trust Fund payment in an amount not to exceed \$250,000.00 per incident for removal costs consistent with the NCP. The removal costs must be required for the immediate removal of a discharge, or the mitigation or prevention of a substantial threat of discharge, or oil. Pursuant to the authority delegated to the Coast Guard in Executive Order 12777, the Coast Guard has published an interim regulation (33 CFR Part 133) to implement the provision of section 1012(d)(1) of OPA 90.

Funding under section 1012(d)(1) will herein be referred to as "State Access." These procedures focus on information that is needed to support cost recovery efforts of the NPFC.

These procedures do not address the provisions of Section 1012(d)(2) of OPA 90 (e.g., advance agreements with individual States, advance payments from the Fund, or access to the Fund by political subdivisions of a State).

State Access to the Fund provides a new avenue for States to receive Federal funds for immediate removal costs resulting from their response to actual or threatened discharges of oil. State Access does not supersede or preclude the use of existing Federal payment regimes. The State should not seek and will not receive payments for the same costs from more than one payment regime. Generally, there are two other payment regimes which the States may initiate to obtain Federal funding for oil spill incident removal actions:

1. **ACTING AS OSC CONTRACTOR.** State agencies may perform removal actions under the direct supervision of the OSC. In these situations, the OSC issues an Oil Spill Response Authorization to the State to establish a contractual relationship and obligate the Fund. With this method of funding the State is not limited to \$250,000.00 per incident, and the OSC is actively directing the State's response actions.

2. **CLAIMS.** Section 1012(a)(4) of OPA 90 authorizes use of the Fund for "the payment of claims in accordance with section 1013 for uncompensated removal costs determined by the President to be consistent with the NCP or uncompensated damages". Regulations describing claims procedures are found in 33 CFR Part 136. States may submit claims for uncompensated removal costs, which may include those salaries, equipment, and administrative costs directly related to a specific incident. A State may submit claims for removal costs directly to the Fund even if the responsible party is known. Claims other than for removal costs must first be submitted to the designated responsible party. Claims payments are not limited to \$250,000 per incident.

For additional information regarding these procedures or related subjects, State representatives, OSCs, and other interested parties are urged to contact the NPFC at 703/235-4767.

### REQUESTING FUNDS

Pursuant to 33 CFR 133.5, 133.7, and 133.13, the following will be evaluated by the OSC when contacted by the State requesting funds under section 1012(d)(1):

1. Is the incident eligible for immediate removal under the Clean Water Act, as amended by OPA 90?
2. Is the substance discharged/threatening discharge oil?
3. Did the incident occur after August 18, 1990?
4. Is the aggregate amount of the request equal to or less than \$250,000?
5. Are the proposed actions consistent with the NCP (including 40 CFR 300.305(c)'s requirement that a reasonable effort is made to have the discharger voluntarily and promptly perform removal actions)?
6. Are the proposed level of response, proposed actions, and amounts requested appropriate for the circumstances?



7. Has the State the means to complete the immediate removal?

#### COSTS INCURRED BEFORE OSC CONTACT

Immediate removal costs involving a specific oil discharge incident which, due to exigent circumstances, were incurred by the State prior to the initial request to the OSC for State Access, are allowable under State Access if the OSC determines that: 1) notification is timely; 2) the response was consistent with the magnitude of the incident; and 3) costs incurred were otherwise reasonable under the circumstances and in all other respects were allowable.

#### CONTACTING THE OSC

In accordance with 33 CFR 133.9, the Governor or designated State Official (henceforth referred to as the State Official) shall request access to the Fund from the OSC who is pre-designated for the area of the incident. The pre-designated OSC can be reached by calling the National Response Center at 800/424-8802. payment in an amount not to exceed \$250,000.00 per incident for removal costs consistent with the NCP. The removal costs must be required for the immediate removal of a discharge, or the mitigation or prevention of a substantial threat of discharge, or oil. Pursuant to the authority delegated to the Coast Guard in Executive Order 12777, the Coast Guard has published an interim regulation (33 CFR Part 133) to implement the provision of section 1012(d)(1) of OPA 90.

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Pursuant to 33 CFR 133.5, 133.7, and 133.13, the following will be evaluated by the OSC when contacted by the State requesting funds under section 1012(d)(1):

1. Is the incident eligible for immediate removal under the Clean Water Act, as amended by OPA 90?
2. Is the substance discharged/threatening discharge oil?
3. Did the incident occur after August 18, 1990?
4. Is the aggregate amount of the request equal to or less than \$250,000?
5. Are the proposed actions consistent with the NCP (including 40 CFR 300.305(c)'s requirement that a reasonable effort is made to have the discharger voluntarily and promptly perform removal actions)?
6. Are the proposed level of response, proposed actions, and amounts requested appropriate for the circumstances?
7. Has the State the means to complete the immediate removal?

### COSTS INCURRED BEFORE OSC CONTACT

Immediate removal costs involving a specific oil discharge incident which, due to exigent circumstances, were incurred by the State prior to the initial request to the OSC for State Access, are allowable under State Access if the OSC determines that: 1) notification is timely; 2) the response was consistent with the magnitude of the incident; and 3) costs incurred were otherwise reasonable under the circumstances and in all other respects were allowable.

### CONTACTING THE OSC

In accordance with 33 CFR 133.9, the Governor or designated State Official (henceforth referred to as the State Official) shall request access to the Fund from the OSC who is pre-designated for the area of the incident. The pre-designated OSC can be reached by calling the National Response Center at 800/424-8802.

Following receipt from the State of source and RP information, the NPFC case manager issue a Letter of Designation to the RP(s) to notify them of their designation as an RP and their responsibilities as an RP under

Federal law. Also, the NPFC will send a copy of the Letter of Designation to the OSC and State official.

## REMOVAL COSTS

Funds provided to the State under OPA 90 Section 1012(d)(1) are for “immediate removal” of a discharge or substantial threat of a discharge. Pursuant to OPA 90 Sections 1001(31) and 1012(a)(1), and 33 CFR 133.13, allowable removal costs are all direct costs incurred to prevent, minimize, and mitigate oil pollution from the specific incident, including the costs of monitoring removal actions taken by the RP and the costs to prepare required documentation. State Access may only be used to pay for removal costs that are directly related to the specific incident. Costs must generally be incurred at the site or in support of on-site activities. State Access to the Fund is for immediate removal or remediation costs, not the costs of natural resource damage assessments. If questions arise, contact the NPFC case manager. Allowable costs include:

### A. Contract Costs

The state may be paid for contract costs incurred specifically for the removal action (e.g., cleanup contractor costs, waste disposal contractor costs, administrative contractor costs (for on-site cost documentation), etc.).

### B. Out of Pocket Expenses

The State may also be paid for unbudgeted out-of-pocket State costs incurred specifically for the removal action, (e.g., OSHA and RCRA costs for the incident, travel to the site, consumable materials purchased specifically for the removal action, transportation or shipping costs for bringing materials to the site, equipment rentals, etc.).

### C. State Salary, Equipment, and Overhead costs

The State may be paid for the salaries of personnel directly employed in the removal activities (including documenting those activities), the costs associated with the use of State equipment, and applicable overhead costs as may be applied in accordance with OMB Circular A-87. Incorporating the State’s predetermined standard rates for the period of use (usually hours or days) is the preferred method.

## RECORD KEEPING

In accordance with 33 CFR 133.19 and Section 300.315 of the NCP, the State shall establish sufficient controls and procedures to provide documentation as follows:

The State should clearly identify the costs of immediate removal activities, the need for incurring those costs, the source of the spill, the identity of the RP(s), and the facts which support those conclusions.

Provide documentation that the work or purchase was authorized, (e.g., contracts, travel orders, purchase orders, work orders, rental contracts, etc.). The documentation should indicate why that activity was necessary and show the relationship to the removal actions at the specific site. A supervisor’s certification is sufficient for State direct labor costs.

Provide documentation that the work or purchase was reviewed and accepted as complying with the authorization (e.g., receiving reports, delivery tickets with receipt signatures, adhoc reports, etc.).

Provide documentation of the cost of the work or purchase and that the State was properly billed for those costs, (e.g., contractor's/ vendor's invoice, cash register receipts, travel reimbursement vouchers, employee time sheets or logs, etc.).

The documentation should show the work performed - the service provided, the equipment used, the persons employed, etc. - and the quantity of each item of work performed each day (i.e., the delivered work product). Contractors performing work should prepare the documentation of the work performed. The State is responsible for ensuring the documentation of salary and equipment usage costs for the State.

The documentation should identify costs according to the unit of work for each item. For contracts, that unit of work is established by the contract line items (CLINs). For time and material based contracts, the unit of work is normally hours. The delivered work product for documentation purposes is, however, the number of units of the item provided per day (unless otherwise specified). For State employee salary costs, the unit is hours of work. For State equipment, the work unit is also typically hours, unless specific daily rates are established for that equipment.

The documentation should show the cost of each unit of each item of work per day (or other time period set in the controlling agreement for that item) and the extended total cost. As discussed above, State salary and equipment usage costs should be determined using the State's standard rates.

Provide documentation that the amount invoiced, shown on receipts, or presented on travel vouchers was paid or authorized for payment. State certification that the cost is authorized for payment and will be paid through normal State processes is sufficient for requesting payment from the Fund, provided that any later corrections or changes to the amount paid are promptly reported to the NPFC.

State salary, equipment, and administrative costs are documented as follows for each day of removal activity:

1. Date
2. Identification (employee ID, equipment ID or description, function for removal action)
3. Category (e.g., grade level, equipment type)
4. Number of hours charged for that day
5. Rate
6. Total cost (hours times rate)
7. Cumulative total for all days

## INCIDENT REPORT

The State official requesting Fund access should ensure that an Incident Report is submitted to the NPFC and the OSC within 30 days after the completion of immediate removal activities. Incident Reports are discussed in detail in Section C, Annex II, Tab B.

## REQUESTING PAYMENT

The State should forward the documents listed below to NPFC (cm). The State will receive payment for allowable immediate removal costs after the documentation has been received and reviewed favorably by the

NPFC.

The State requests payment using either 1) SF-1080, Voucher for Transfers Between Appropriations and/or Funds (preferred), 2) SF-270, Request for Advance or Reimbursement, or 3) an equivalent State invoice acceptable to the NPFC.

Submitting a properly-documented request for a partial payment is encouraged if preparing the submission of a request for full payment would delay the NPFC's receipt of the Incident Report longer than 30 days beyond the completion of the immediate removal.

### CERTIFICATIONS

Certain certifications involving cooperative agreements between Federal and State agencies are required by 49 CFR Parts 18, 20, and 29. Accordingly, the State official shall ensure compliance with, sign, and return the following certifications:

1. Certification Regarding Lobbying.
2. Certification Regarding Debarment, Suspension, and Other Responsibility Matters.
  - a. The certification for Primary Covered Transactions is required from the State itself.
  - b. The certification for Lower Tier Covered Transactions shall be submitted by the State on behalf of each of its contractors.
3. Certification Regarding Drug-Free Workplace requirements.
  - a. Required from the State to certify its employees. If, in accordance with 49 CFR 29.630(C), the State has a current blanket Drug-Free Workplace certification, the State official may forward a copy of it in lieu of signing an incident-specific certification.

By the act of submitting the request for payment, the State official is certifying that costs incurred were consistent with the advance approval by the OSC, that costs were directly related to removal actions for the specific incident, and that the State will pay or has paid the amounts presented.

In accordance with 33 CFR 133.19(b), the request for payment, Incident Report, cost documentation, and certifications described above should reach the NPFC no later than 30 days after the completion of immediate removal actions. In the event that certain documentation is unavailable or delayed, the State should submit supplemental request for payment as the additional records become available. This information is needed rapidly to allow the NPFC to expeditiously pay the State and seek reimbursement from responsible parties. In accordance with 49 CFR 18.41(b)(4), the NPFC may deobligate the Fund for payment if all required

Upon receipt of the documents in the paragraphs listed above, the NPFC will review them for completeness and to ensure that all removal costs are eligible for payment. If the documentation is not complete, the NPFC will promptly notify the State of what information is missing. If the NPFC determines that there are costs of an operational nature which may be ineligible for payment, the NPFC will confer with the cognizant OSC. If the NPFC concludes that certain removal costs are ineligible for payment, it will delete those costs from the payment request made to the USCG Finance Center, and will promptly send a report of the disallowed costs to the State and to the OSC. If, 90 days following the completion of the immediate removal, the State has failed to submit documentation to the NPFC which the NPFC finds to be complete and satisfactory, the NPFC may deobligate the Fund for payment of any removal costs which remain unsubstantiated.

### PAYMENT PROCESS

After the State documents are reviewed and found to be complete and satisfactory, the NPFC Case Manager authorizes payment and the NPFC Financial Manager promptly processes the payment through the USCG Finance Center.

By requesting State Access to the Fund, the State agrees to cooperate fully in any cost recovery actions and/or litigation to enforce the provisions of OPA 90.

### DOCUMENTATION AND THE OSC

Copies of the FPN/ceiling authorization, Oil Discharge Removal Authorization, Incident Report, cost documentation, and report of disallowed costs are sent to the OSC for informational purposes only. The OSC is not obligated to review or retain these documents.

### RELATIONSHIP TO COOPERATIVE AGREEMENT REQUIREMENTS

As described in 33 CFR 133.5(c), the Federal Grant and Cooperative Agreement Act of 1977 (31 USC 6301-6308) and 49 CFR Parts 18, 20, 29, and 90 apply to Fund monies obligated for payment under the State Access provisions of Section 1012(d)(1) of the Oil Pollution Act. While compliance with these laws and regulations requires the submission of certain forms/reports from the State to the Federal government, some of the forms/reports have been waived because the nature of immediate removal actions obviates the need for them.

### REQUIRED FORMS/REPORTS

The following forms/reports are required by 49 CFR 18, 20, and 29. These forms have not been waived, and should be submitted concurrently with the Incident Report and cost documentation:

1. SF-270, Request for Advance or Reimbursement

This form or the optional/preferred SF-1080 (Voucher for Transfer Between Appropriations) or a State invoice acceptable to the NPFC is used by States to request payment from the Fund.



## 2. Certification Regarding Lobbying

Required by 49 CFR 20. A copy of this certification is included in the certifications package provided by the NPFC to the State.

## 3. Certification Regarding Debarment, Suspension, and other Responsibility Matters

Required by 49 CFR 29. A copy of this certification is included in the certifications package provided by the NPFC to the State. The cooperative agreement between the State and the Coast Guard is a primary covered transaction. A contract between the State and a private contractor is a lower-tier covered transaction.

## 4. Certification Regarding Drug-Free Workplace Requirements

Required by 49 CFR 29. A copy of this certification is included in the certifications package provided by the NPFC to the State (see previous paragraphs for blanket certification exception).

The requirements in 49 CFR Parts 18, 20, and 29 regarding the following specific forms and reports are waived as follows for State Access under 1012(d)(1) of the Oil Pollution Act:

### 1. SF-424, Application for Federal Assistance

The requirement for use of this form is waived. The request made by the Governor or his/her designated representative to the FOSC for access to the Fund suffices as an application.

### 2. SF-272, Federal Cash Transactions Report

This form is not required since, under OPA 90 Section 1012(d)(1), the Fund only pays States for costs already incurred.

### 3. SF-424A, Budget Information - Non-construction Programs

This form is not required since, under OPA 90 Section 1012(d)(1), the Fund only pays States for costs already incurred, and each incident represents a separate agreement between the State and the Fund.



#### 4. SF-424C, Budget Information - Construction Programs

This form is not required because removal actions are not considered construction programs.

#### 5. SF-269A, Financial Status Report

The requirement for this report is waived. The State's request for payment that is submitted with the Incident Report and accompanying cost documentation meets all financial reporting requirements. It is envisioned that each incident would be completed in substantially less than three months.

#### 6. Nonconstruction Performance Reports

The requirement is waived. Performance information available from subsequent applications contains sufficient information to meet programmatic needs.

### FEDERAL AUDIT

In accordance with 49 CFR 90, acceptance of Federal funds through a cooperative agreement may make the State subject to an annual or biennial Statewide Federal audit of all of its grants and cooperative agreements with the Federal government.

### **TAB D NATURAL RESOURCE DAMAGE ASSESSMENT**

The overall goals of the natural resource damage assessment (NRDA) process are to restore the injured environment and its components to pre-spill conditions and to obtain compensation for all documented losses. In general, this process may require years to complete and the individual phases of documenting injuries, assessing damages, settling claims, and undertaking restoration programs. This document addresses the NRDA process only during its initial stages while response efforts are underway. In many instances, this will be a period of about one month. This document attempts to describe the NRDA process, identify the principle participants in NRDA activities, and clarify the relationship of NRDA within the framework of the Incident Command System (ICS). Additional information is provided concerning NRDA funding and the requirements for federal, state, and local permits necessary to collect information for NRDA.

It is highly desirable for all federal and state resource trustees to coordinate their interactions and to consult with local governments and interest groups from the effected area to produce a single NRDA for all injuries to public trust resources. It is desirable to coordinate these activities with the efforts of a cooperative responsible party (RP) as soon as possible to the extent that trustee responsibilities are not compromised.

### **BACKGROUND AND STRUCTURE**

Oil spill incidents of significance initially lead to two primary actions: a response to contain and cleanup the spilled oil, and an assessment of the injuries to natural resources caused by the pollutant. In 1990,

Congress enacted the Oil Pollution Act (OPA 90; 33 U.S.C. 2701 et. seq.). OPA 90 authorizes Federal resource trustees (Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of the Interior), State resource trustees (designated by the governor of each state), federally recognized Indian tribes, and foreign trustees to seek compensation for injuries to natural resources caused by the discharge of oil. For purposes of this document, these groups are referred to as either “trustees” or “trustee agencies”. In California, the governor plans to designate either the Resources Agency or Cal EPA as the Lead State Trustee depending upon the resources that are affected.

Damage assessments for natural resources shall be coordinated by representatives from each of the trustee agencies with affected resources. The trustees will work as a team to develop a single approach to the assessment process. The NRDA Team will consult with members of appropriate governmental bodies and interest groups from the affected area to address local concerns. Cooperative RP(s) may be invited to participate with the NRDA Team activities to develop one unified NRDA plan for public trust resources. A cooperative damage assessment could greatly minimize costs by eliminating parallel assessments by the trustees and the RP. However, due to the statutory responsibilities, the trustees must maintain management and oversight of any cooperative damage assessment.

### NOAA REGULATIONS

The National Oceanic and Atmospheric Administration (NOAA) is in the process of promulgating regulations for NRDA of injuries resulting from a discharge of oil. These regulations will supersede the Department of the Interior’s (DOI) NRDA regulations implementing portions of the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9601 et. seq.) (CERCLA) for oil spills. Any assessment of damages prepared in accordance with the regulations being promulgated by NOAA shall have the force and effect of a rebuttable presumption on behalf of the trustees. The RPs then have the initial burden of disproving the assessment.

The rules being promulgated by NOAA will provide further guidance on economic methods to estimate both active (direct) and passive (indirect) use damages resulting from oil spill injuries. The NOAA Rules will have similar advantages to the DOI Rules but will be more specific oil-related injuries and the dynamics following an oil spill incident.

### SB 2040

The California Lempert-Keene-Seastrand Oil Prevention and Response Act (SB 2040; 1990) was enacted shortly after OPA 90. Under SB 2040, spillers are strictly held liable for damages, including natural resource damages, resulting from a discharge of oil into marine waters of the State. Natural resource damages, therefore, can be sought through federal or state law or both may be claimed at once. Double recovery is not permitted, and hence it is imperative in spills of significance that Federal and State trustees coordinate claims for natural resource damages. The monetary damages are compensatory rather than punitive in nature.

### CERCLA

The Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C.9601, et seq.) (CERCLA) was enacted in 1980. CERCLA authorizes Federal and State governments and federally-recognized Indian tribes to act as public trustees of natural resources and pursue damages from the RP(s) for injuries to natural resources caused by release of a hazardous substance. The law also authorizes trustees to assess damages to natural resources for the purpose of Section 1321 of the Clean Water Act (33 U.S.C. 1251, et seq.). Pursuant to CERCLA, the DOI promulgated the first NRDA regulations (“DOI RULES”)

establishing procedures that trustees may follow. The procedures, as modified in accordance with decisions from two key cases involving the states of Ohio, and Colorado, provide guidance for measuring injuries to natural resources and quantify damages (dollars) for the injuries. The overall scheme set forth in the DOI Rules is the emphasis for NOAA's pending NRDA regulations. It is also important to understand the procedures set forth in the DOI Rules because CERCLA shall still apply to oil spills in which the oil is mixed with a hazardous substance as defined in 43 U.S.C. 9601(14).

## ASSESSMENT PROCEDURES

The assessment procedures set forth in the DOI Rules are not mandatory. However, they must be used by the Federal or State natural resource trustees to obtain a rebuttable presumption that a specific assessment of damages is correct. The DOI Rules set out two types of assessment procedures. The "Type A" procedure uses a computer model to calculate damages and is a simplified assessment process. The "Type B" procedure is more comprehensive and time consuming but may be tailored for individual cases.

Five steps are described in the DOI Rules for determining injury and translating quantified amounts of injury into monetary damages. The steps include: (1) conducting an initial preassessment; (2) conducting a preassessment screen; (3) preparing an assessment plan; (4) conducting the assessment following either the "Type A" or "Type B" rules; and (5) preparing a post-assessment report. Although the regulations provide the option for the trustees to use either "Type A" or "Type B" procedures in a given case, in practice, both may be employed in practice. The speed of the "Type A" may prove especially useful during the initial preassessment, whereas the "Type B" procedure may be employed if a full assessment is conducted.

NOAA intends to adopt four assessment procedures as possible options in the regulations being developed under OPA 90. These include (1) a compensation formula or damages table based on the amount and type of oil spilled, season, geographic location, and type of habitat affected; (2) the "Type A" computer model mentioned above; (3) an expedited damage assessment based on limited and focused studies; and (4) a comprehensive damage assessment based on numerous in-depth studies.

Initial steps in the NRDA process require documentation of a pathway for the spilled oil, demonstration of oil contact with specific resources along the pathway, and quantification of the injuries caused by the spilled oil. Natural resources and the services provided by such resources may be injured or disrupted through direct or indirect exposure to released substances.

The methods used to assess the injuries arise largely from current scientific practices and best professional judgement. The DOI Rules provide guidance on specific types of biological injuries (e.g., death, physiological malfunctions such as decreased reproductive capacity) that may be used to claim damages. The scope of possible injuries extends beyond impacts to single organisms and may include effects on populations, habitats, and ecosystems. In all instances, however, injuries should be related to the loss of service(s) provided by the injured resource.

"Services" include physical and biological functions provided by the natural resource to the ecosystem as well as other functions related to human use of the resources. Production of food, protection from predators, maintenance of community diversity, and provision of habitats are examples of some services provided to the

ecosystem or its constituents. Examples of services provided to humans by natural resources include recreational opportunities such as fishing, wildlife viewing and beach activities. Other services that humans may receive may be less tangible and related to the knowledge that a resource exists and is healthy or will continue to exist for the benefit of future generations. Although services lost through injuries to specific resources may be qualitatively describes with relative ease, quantitative assessment of losses and subsequent translation into monetary damages is often difficult.

### PRELIMINARY DAMAGE ESTIMATES

Expected damages should be calculated as soon as possible to determine the scope of the case and the prudence of undertaking certain types of studies. Damage estimates should include (1) the reasonable costs of injury assessment, (2) the cost of restoring, rehabilitating, replacing or acquiring the equivalent of the damaged resources, and (3) the value of interim losses in both active use (e.g., commercial, recreational) and passive use (e.g., existence value) of resources pending restoration or natural recovery.

### NRDA PROCESS

Successful pursuit of NRDA actions, either by the trustees alone or in cooperation with the RP(s), is a complex process comprising numerous tasks involving the interaction of scientists, economists, lawyers, and administrators. The DOI Rules reduce some of the complexity by establishing an assessment process and providing a mechanism for determining the merits of going forth with the assessment and claim. The process provides a record of the trustee's decisions.

Other advantages to following the predefined assessment process warrant its use. The rebuttable presumption afforded by following the DOI Rules makes claims less vulnerable to criticism and more likely to succeed should litigation occur. Additionally, the DOI Rules provide a set of national standards to define certain types of injuries, and describe methods for translating natural resource injuries into monetary values.

### NRDA WITHIN THE ICS

The Incident Command System (ICS) is an organizational scheme designed to efficiently and effectively manage personnel and resources during emergency incidents. The system is designed to be adaptable to any size event, and can be changed in structure to conform to the needs of the response. One objective of the ICS is to reduce or eliminate the duplication of efforts by the numerous response agencies while attempting to control or contain the spill and mitigate possible impacts of the spilled oil. A small group consisting of the On Scene Coordinator (OSC), the State Incident Commander (SIC), and a representative of the RP form the Unified Command (UC), which coordinates and directs the actions of the response. Concerns of the affected local government are presented to the UC by the SIC. For additional details on the ICS consult Annex A, Appendix V, Tab H.I of this ACP.

Assessment of injuries and damages resulting from spilled oil need to begin as soon as possible following the initial release of the pollutant. This results in NRDA activities being conducted simultaneously with response efforts coordinated by the UC. Portions of the NRDA process should be integrated into the ICS to improve communication, expedite both response and NRDA activities, and make efficient use of personnel and equipment. To avoid potential conflicts in duties, it is recommended that members of the NRDA team not have

responsibilities for the spill cleanup or general response activities.

The focus of the NRDA Team is to document a pathway for the spilled oil, measure levels of injuries resulting from the spill, and determine damages. The UC, in contrast to the NRDA Team, focuses primarily on response, cleanup, and mitigation of injuries. Although the UC and NRDA Team often have different responsibilities and needs, many of their activities overlap and require coordination. Some examples of activities to be coordinated immediately following a spill include collecting samples (e.g., access to restricted sites, sampling prior to cleanup), gathering information pertinent to measuring actual or potential changes to natural resources, using equipment (boats, helicopters, etc.), communications, and surveying spill sites.

Uninterrupted communication between the UC and the NRDA Team is essential to ensure that response strategies selected by the UC are compatible to the maximum extent possible with the efforts and needs of the NRDA Team. Information concerning spill trajectory forecasts, beach and port closures, and cleanup strategies should be made available to the NRDA Team to assist sample and data collection in a timely fashion. Conversely, information concerning potential injuries to natural resources caused by oiling or response techniques should be made available to the Planning Section before implementation of cleanup responses by the Operations Section.

The ICS organization chart currently used by the Eleventh District of the United States Coast Guard (USCG) aligns NRDA with the Planning Section's Technical Branch. It is important to note that the RP is part of the UC but may not necessarily be part of the trustee's coordinated NRDA activities. For this reason, the NRDA Team must remain separate from the ICS to ensure that statutory responsibilities of the trustees are not compromised. The trustees retain the option of inviting the RP to participate in all or part of the damage assessment process. Some NRDA activities, however, are best coordinated through the UC. The NRDA Team will provide a representative(s) to the Planning Section to present the needs of the NRDA Team and other response information to the incident command. The NRDA Representative(s) will also act as historian or recorder of information critical for an accurate assessment of spill damages and will attend the daily operations meeting to secure knowledge of the up-to-date response activities.

#### NOTIFICATION PROCEDURE FOR INITIATING NRDA ACTIONS

In the event of a spill, each agency is responsible for notifying its own members of the NRDA Team. Individual federal, state, and local agencies may be notified through various channels depending on the size and location of the spill. In all incident that might require NRDA action, the Office of Oil Spill Prevention and Response (OSPR) of the California Department of Fish and Game (CDFG) will attempt to notify representatives from each of the trustee agencies expected to participate in the NRDA process.

#### IDENTIFICATION OF ADMINISTRATIVE TRUSTEE

Executive Order 12777 (October 22, 1991) requires the federal natural resource trustees to select a representative as the federal lead administrative trustee (LAT). In general, the LAT serves as the federal contact for all aspects related to damage assessment, resource restoration, and federal funding for NRDA activities. Depending on the resources affected and other relevant factors, it might be appropriate for most administrative duties to be undertaken by a lead trustee from a non-federal agency. In such cases, a LAT would still be selected to work with the representatives of the Oil Spill Liability Trust Fund to secure federal funds to initiate the damage assessment. All other administrative duties regarding damage assessment activities would be coordinated by the non-federal lead trustee. This lead trustee or trustee agency shall be selected by consensus



of all participating trustees. The trustees will notify the Coast Guard of the LAT and, when applicable, non-federal lead trustee as soon as possible after an oil spill.

The trustees intend to execute a general Memorandum of Agreement (MOA) to coordinate their damage assessment and restoration activities. Among other things, the MOA will identify trustees, establish criteria for selecting the LAT, and provide procedures for decision making and monetary recoveries.

## FUNDING ISSUES

### **OIL SPILL LIABILITY TRUST FUND (OPA FUND)**

The LAT will contact the OSC or his/her representative to secure money to initiate the assessment of natural resource damages following an oil spill. The LAT will provide an outline of studies jointly agreed upon by the participating trustees for which funding is sought and how such funds will be allocated among the trustees. Each participating trustee will provide documentation of all expenditures, costs and activities. The LAT is responsible for coordinating all such documentation to the representative.

### **OIL SPILL RESPONSE TRUST FUND (CALIFORNIA STATE RESPONSE FUND)**

If the federal funds are not available, or will not be available in an adequate period of time, and an RP does not exist or is unable or unwilling to provide adequate and timely payment for cleanup and damage assessment activities, the State Administrator for oil spill response may access the California State Response Fund. Money from the California State Response Fund may be used to cover state damage assessment costs.

### **CONTACTS WITH RESPONSIBLE PARTY(IES)**

The trustee will need early access to representatives of the RP(s) to determine the availability of funding, personnel, and equipment for damage assessment activities. The LAT or non-federal lead trustee will first notify the appropriate representative of the USCG or UC and request a meeting between the trustees and the RP's representative. Should the USCG or UC fail to arrange a timely meeting, the trustees will establish contact directly with the RP's representative.

### **PERMITS REQUIRED BY FEDERAL, STATE, AND LOCAL AGENCIES TO CONDUCT**

#### **NRDA ACTIVITIES**

Please refer to Annex J Appendix II Tab P for information regarding permits required to conduct NRDA activities. The list of permits may be expanded in subsequent revisions to this document.

### **SUPPORTING REFERENCES**

#### CASES

- 1) State of Ohio vs. United States Department of the Interior, 880 F.2d 432 (D.C. 1989)
- 2) State of Colorado vs. United States Department of the Interior, 880 F.2d 481 (D.C. Cir 1989)

## REGULATIONS

- 3) 40 CFR 300.600 (Identification of Federal Trustees; CERCLA)
- 4) 40 CFR 300.605 (Identification of State Trustees; CERCLA)
- 5) 43 CFR Part 11 (DOI Rules)

## STATUTES

- 6) Ca. Govt. Code 8670.1, et.seq. (SB 2040)
- 7) 33 U.S.C. 1251, et.seq. (Clean Water Act)
- 8) 33 U.S.C. 2701, et.seq. (Oil Pollution Act of 1990)
- 9) 42 U.S.C. 9601, et.seq. (CERCLA)



## ANNEX C OPERATIONAL ADMINISTRATION

### APPENDIX II REQUIRED LETTERS AND REPORTS

#### TAB A LETTERS

1. Notice of Federal Interest for an Oil Pollution Incident (Form CG-5549)

2. Notice of Federal Assumption (Figure C-II-A-1)

3. Letter of Designation of Source

- The OSC is responsible for notifying the NPFC of the source of a discharge, actual or potential. The NPFC must also be notified if the source is not identified. Notification may be made by letter, Rapidraft, or message (POLREP or SITREP). The NPFC should be contacted for guidance on procedures, or with any questions relating to this.

4. Administrative/Directive Order

*(To be distributed under separate cover)*

#### TAB B OSC REPORT

OSC Reports will be submitted as required by the RRT or at the discretion of the OSC for a particular incident as stated in 40 CFR 300.165.

#### TAB C POLLUTION REPORTS

POLREPS shall be submitted in accordance with the requirements outlined in Volume VI, Chapter 7.B.5.b of the Marine Safety Manual. The POLREP format can be found in Volume VII of the Marine Safety Manual, Figure 7-7.

#### TAB D POLLUTION INVESTIGATION

### INTRODUCTION

Several federal, state, and local agencies have a direct role in the enforcement of applicable laws and regulations associated with a discharge, or substantial threat of a discharge, of oil into the navigable waters of the U.S. The investigation into alleged violations of the many applicable laws and regulations requires a coordinated effort among the many agencies involved. As a preliminary step to enhance the effectiveness of investigative **activities** and limit the potential negative impact of these activities upon the cleanup and removal actions associated with an incident, the following agencies have been identified as having a direct, field oriented role in the initial stages of these events.

### INVOLVED AGENCIES

The United States Coast Guard. The U.S. Coast Guard has enforcement and investigative authority for a significant array of potential violations of federal laws and regulations, as well as enforcement actions under applicable international treaties. The principal, though not exclusive, federal laws and

regulations associated with a discharge or a substantial threat of a discharge of oil include applicable components of the Clean Water Act as amended; the 011 Pollution Act of 1990; the Ports and Waterways Act; The Port and Tanker Safety Act; The Act to Prevent Pollution from Ships (1980), as amended; and, Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78). In addition, authorities pursuant to 46 VSC 7701 and 46 USC 6101 relate to personnel actions (licensed mariners), and marine casualties, respectively. The federal regulations associated with potential investigative or enforcement interest under these circumstances include, though are not limited to, applicable sections of 46 CFR with particular attention to Parts 4, 5, 16; 33 CFR Parts 126, 130, 151, 153-160; and 40 CFR Parts 116, and 117. Potential federal enforcement actions associated with a pollution discharge may include but are not limited to: collection of statements and evidence to determine the causes of the associated marine casualty, mandatory chemical testing of involved licensed personnel, and the collection of oil samples in the water and on suspect vessels.

The State of California, Department of Fish and Game, Office of 011 Spill Prevention and Response (OSPR). The Lempert-Keane-Seastrand 011 Spill Prevention and Response Act of 1990 (SB 2040) details the role of the OSPR in spill investigations. OSPR is the lead investigative unit for state and local governments. As the lead agency, OSPR *will* coordinate the investigative efforts for these government agencies. Government Code Section 8670.7 specifically requires the Administrator of OSPR to determine the cause and the amount of a discharge. The investigative goals of OSPR are: to take samples and secure evidence relevant to the spill; conduct interviews of any person with special knowledge as to the facts of the spill and make arrests, if necessary and appropriate; determine and document the facts related to the cause of the spill; secure evidence relevant to determining the volume of oil spilled and the amount recovered; determine if a responsible party exists and whether or not the responsible party will take financial responsibility for the cleanup and containment of the spill; and, make an initial determination as to whether or not the facts of the investigation indicate a violation of state or local laws or regulations, - and if they do, initiate criminal or civil actions through the appropriate legal Jurisdiction(s). State authority extends anywhere within the state and out to three miles from the shoreline. However, "hot pursuit" and other legal principles allow OSPR to operate outside of this narrow area of authority.

State of California, State Lands Commission. The Lempert-Keane-Seastrand 011 Spill and Response Act of 1990 (SB 2040) details the role of the State Lands Commission (SLC) in spill investigations within the Jurisdictional boundaries of the State of California. The investigative role of the SLC following a *8Pill will*

OSPR Administrator in determining the cause and amount of the discharge in accordance with California Government Code, Title 2, Chapter 7.4, Article 2, Section 8670.7(e). In addition, the SLC *will* be assessing the cause of the *8pill* to determine the effectiveness of its regulations and *8pill* prevention programs. The goal *will* be to change these regulations or programs as necessary to prevent or reduce

the risks of similar occurrences in the future. SLC's jurisdiction applies to marine terminals and offshore platforms within three miles of shore. Investigative activities may be necessary onboard a vessel if the circumstances are such that a vessel is involved in a discharge at or involving a marine terminal or offshore platform within 3 miles of shore.

State of California, Office of the State Fire Marshal, Pipeline Safety Division. The goal of this office is to provide pipeline safety within the jurisdictional boundaries of the State of California.

California Government Code Sections 40400 - 52999, Chapter 5.5 of the California Pipeline Safety Act of 1981 has given the State Fire Marshal's Office authority to respond to pipeline related offshore oil spills to determine compliance with pipeline safety regulations on construction, maintenance, and operations (normal, abnormal, emergency procedures, and cleanup responses). Sections 51015 and 51018 of the California Government Code specifically address inspections. Sections 51010, 51010.5, and 51010.6 pertain to jurisdictional pipelines, while Sections 51018.6 and 51018.7 provide civil penalties and criminal penalties, respectively by the California State Fire Marshal. For interstate pipeline spills, the California State Fire Marshal's office acts as an agent for the US Department of Transportation, Office of Pipeline Safety (OPS) with enforcement ultimately administered by OPS.

United States Department of the Interior, Minerals Management Service (MMS). The MMS's regulatory authority for accident investigation of offshore oil and gas facilities and related operations is based on the provisions in 30 CFR Part 250.19, Accident Reports (see also the OCS Lands Act Amendments, September 18, 1979, 43 USC 1801, Title II, Sec 208, Sec 22 (d) (1)). The MMS Manual states that the agency's principal objectives in conducting accident investigations are: ~...to ensure consistent data collection and investigation of accidents in order to gather the information necessary to determine the cause(s) and to make appropriate recommendations for any corrective action needed. The primary goals are to prevent the recurrence of accidents, to enhance the safety of operations, and to protect the environment. (MMS Manual, Program Series, Part 640, Rules and Operations, Chapter 3, Accident Data Collection and Investigation, August 3, 1992). The MMS manual further states in Chapter 3.3.(A.) that unless otherwise specifically ordered by the Director, all investigations...shall be fact-finding proceedings with no criminal issues and no adverse parties. The purpose of the investigation is to prepare a public report. An August 29, 1989 Memorandum of Understanding (MOU) between the MMS and USCG provides guidelines for convening accident panels and coordinating accident investigations between the two agencies.

Local Enforcement Authorities. Depending upon in which Jurisdiction a discharge occurs, a number of local agencies may have investigative roles. As an example, the Los Angeles-Long Beach port complex maintains local Tariff regulations and enforcement authorities which are enforced by the ports themselves through their respective law enforcement entities; the Los Angeles Port Police and the Long Beach Harbor Patrol. Other local concerns, such as counties and cities through their respective Harbor Departments or Health Agencies, may be directly involved as the circumstances of the situation dictate.

The County District Attorney's Office. Depending upon the location of the incident, the respective District Attorney's Office may have a direct investigative role. For example, in Los Angeles County, the Environmental Crimes Division of the Los Angeles County District Attorney's Office has Jurisdiction over felony (or misdemeanor, in some cases) prosecutions under the California Government Code. This task requires the ability to promptly investigate marine petroleum spills, and to do so without interference from counsel or other representatives of the suspect entity or individual(s). The District Attorney's focus is on criminal investigations, which are distinct from civil natural resources damages actions. The latter are typically brought by the California Attorney General. Natural resource damage investigations are not the subject of this Appendix.

The City Attorney's Office. Each city in which an incident occurs, or in which the impact of an incident may be directly felt, may have a direct investigative role. For example, in the City of Los Angeles, the Environmental Protection Unit - Special Operations Division of the Los Angeles City Attorney's Office serves as the legal advisor to all City Departments and Bureaus involved in the *investigation of environmental crimes*. The City Attorney's Office has the authority to provide legal advice to the aforementioned personnel through the Los Angeles City Charter. The various City Departments and Bureaus also derive their investigative authority from the City Charter and State General laws which are also known as police powers. Special Operations attorneys provide advice on search and seizure issues which may arise out of the initial criminal investigation of a local marine petroleum oil spill and which may involve any of the city's law enforcement and regulatory personnel.

Other federal, -state, or local agencies may have a direct, field oriented investigative role concerning a discharge or substantial threat of a discharge of oil, as circumstances dictate.

### GUIDING PRINCIPLES

The following general statements summarize the primary guiding principles associated with these direct, field-oriented investigations.

Investigative and response actions must interfere with each other as little as possible. Investigative efforts often involve the collection of evidence in a timely *manner*. This requires investigative efforts and evidence gathering during the high-intensity emergency phase of removal actions. Every effort must be made to coordinate investigative activities to minimize the impact on response and removal efforts. Simply separating investigative and removal functions amongst distinct and different individuals or groups serves to mitigate any potential interference one activity may have on the other. Conversely, individual investigators must understand the concerns of those directing response efforts to minimize the impact of the incident on public health, welfare, and the environment.

Coordination of investigative activities is very important where possible. Any number of mechanisms exist to coordinate efforts onsite during an incident. Periodic coordination meetings greatly enhance command, control, and communications amongst different parties. Lead agencies may carry the dual role of conducting an investigation and coordinating these meetings.

Investigations into, for example, cause, liability, and violations of applicable laws and regulations are a reality. The various federal, state, and local agencies discussed above will be involved in an investigative role as applicable.

Investigative roles, efforts, and degree of interest will vary from incident to incident. Investigative interest and activity will be a function of the scope, size, impact, location, and causes of the incident.

Understanding each agency's role increases the efficiency of investigative activities. There is a need for a strong commitment to develop necessary interagency understandings and working agreements which contribute towards this goal. In addition, these efforts would facilitate the smooth acquisition of necessary information and evidence on an ongoing basis. The emphasis on this element is to make these improvements before an incident occurs.

U.S. Department  
of Transportation  
United States  
Coast Guard



Commanding Officer  
U.S. Coast Guard  
Marine Safety Office  
San Francisco Bay

Building 14  
Coast Guard Island  
Alameda, CA 94501-510  
Phone: (510)437-3073

NOTICE OF FEDERAL ASSUMPTION  
OF RESPONSE ACTIVITIES

16465

Gentlemen:

My letter of \_\_\_\_\_ notified you of Federal interest in an actual or potential pollution incident at \_\_\_\_\_ on \_\_\_\_\_, for which you are presently considered financially responsible.

You are hereby given notice that your actions to abate this threat and to remove the pollutant(s), and to mitigate (its/their) effects have been evaluated as unsatisfactory by the Federal On-Scene-Coordinator. Effective \_\_\_\_\_, the Coast Guard will conduct all response activities under the authority of section 311(c)(1) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1321(C)). Removal will be effected in accordance with the criteria of the National Oil and Hazardous Substances Pollution Contingency Plan and Federal regulations. You may then be billed for all actual costs incurred by the Federal government, as set forth in section 1002(B) of the Oil Pollution Act of 1990.

Should you require further information concerning this matter, you should contact the Duty Officer, U. S. Coast Guard Marine Safety Office, San Francisco Bay, California. The 24 hour telephone number is (510) 437-3073.

Sincerely,

\_\_\_\_\_  
On-Scene Coordinator's  
Representative

\_\_\_\_\_  
Received and Acknowledged

\_\_\_\_\_  
Time and Date

# Annex D

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## **ANNEX D PLAN REVIEW**

### **APPENDIX I REVISION AND UPDATE REQUIREMENTS**

Area Contingency Plans shall be reviewed and updated annually by the Area Committee until 1997. After 1997, the plans will be updated every 5 years. Plans shall be reviewed to ensure all information is current, and in particular, the following areas shall be looked at: emergency notification list, response equipment information (type and amount of equipment available), sensitive areas, hazard/risk assessment of the area, response strategies (changes based on new technology, new equipment, etc.), dispersant approval. Unless the entire plan is revised, any changes to the plan must be noted on the record of changes page.

The Area Contingency Plans for the entire Eleventh Coast Guard District can be received by writing or calling one of the companies listed below.

Sir Speedy  
100 Oceangate, Suite P-245  
Long Beach, Ca. 90802  
PH: 310-435-2564  
FAX: 310-495-1087

The Print Stop  
3100 Willow St.  
Long Beach, Ca. 90806  
PH: 310-424-0977

Change #1



## **ANNEX D PLAN REVIEW**

### **APPENDIX II EXERCISES AND DRILLS**

#### **EXERCISES AND DRILLS**

The opportunity to exercise this plan and components of this plan presents itself via the National Preparedness for Response Exercise Program (NPREP or PREP). The latest draft of the PREP guidelines became available for public review as announced in the 19 October 1993 Federal Register. The PREP guidelines also apply for vessel and facility plan holders. This following discussion focuses on the PREP requirements for the Planning Areas as designated in *Annex A*, Appendix IV, Tabs A-D of this plan.

The Area exercises are divided into two classification categories; internal and external. The internal exercises are: Notification Drills (quarterly); Spill Management Team Tabletop Exercises (SMT-TTX) (annually); Equipment Deployment Exercises (annually); and, Government Initiated Unannounced Exercises (maximum of 4 per area per year). The external exercises are Government led Area exercises and Industry led Area exercises. The On-scene Coordinator (OSC) is responsible for planning, designing, and executing the internal exercises. The National Strike Force Coordination Center (NSFCC) is responsible for scheduling the external exercises and the appropriate OSC remains involved in the planning, design, and execution of the Government led Area exercises. The OSC will consult in exercise development and will participate as appropriate in the Industry led Area exercises.

The scope and objectives of internal and external Area exercises are detailed in the PREP guidelines. Members of the Area Committee and response community will be involved in each type of exercise to some degree, varying from the confirmation of a phone number to assisting in the design of a the scenario and performing as a controller or evaluator of the exercise.

Participation in the PREP and utilization of the PREP guidance will ensure that all federal exercise requirements mandated by OPA 90 have been met. The PREP program requirements are optional for vessel and facility plan holders. However, if PREP guidelines are not followed, plan holders will be required to meet the drill requirements in 33 CFR 155.1060 (vessels) or 33 CFR 154.1055 (facilities). As part of their normal operations, representatives of the Captain of the Port will be verifying that vessel and facility plan holders are conducting and recording required exercises.

#### **Area Drills**

The following Area drills are scheduled in MSO San Francisco Bay's AOR:

##### **Central Coast Area**

(Industry Led Area) April - June 1996

##### **North Coast Area**

(Industry Led Area Vessel) April - June 1997

##### **San Francisco Bay/Delta Area**

(Government Led Area Drill) April - June 1998

# Annex E

## North Coast

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## ANNEX E    AREA ASSESSMENTS

### APPENDIX I   AREA OF RESPONSIBILITY

The North Coast planning area extends from the California/Oregon border to the Gualala River at the Mendocino/Sonoma County line. The area encompasses the coastlines of Del Norte, Humboldt, and Mendocino counties. major harbors located within the planning area include Crescent City harbor in Del Norte County, Humboldt Bay in Humboldt County, and Noyo harbor in Mendocino county. In addition to these, there are several smaller seasonal harbors such as Trinidad and Shelter Cove in Humboldt County, and Albion and Pt. Arena in Mendocino County serving principally the commercial fishing industry and recreational fisherman.

Humboldt Bay is the largest harbor between San Francisco and Coos Bay, Oregon. It is the only harbor in the northern unit receiving a significant amount of ship traffic. Ships and barges also deliver over 2.5 million barrels of petroleum products annually.

Humboldt Bay, Crescent City harbor, and Noyo harbor have large commercial and recreational fishing fleets and marinas for berthing. Boat haul-out and repair facilities are found in all three areas. Fueling can be done from marine fuel facilities located in the harbors, or from mobile facilities. Some commercial fish buyers maintain diesel and gasoline storage tanks for fueling company owned boats. Marine fuel facilities are also located at Trinidad (summer only), Albion and Pt. Arena.

Petroleum tanker traffic off the North Coast is extensive. All crude oil moving from Alaska to San Francisco Bay and Southern California refineries must transit the North Coast. Although many oil tankers serving California have voluntarily agreed to remain 50 nautical miles from the coast while transiting up or down the California coastline, many tankers and tank barges do not. This is a matter of concern because of rough ocean conditions, major headlands that project some distance offshore to create navigational hazards, lack of open ocean response capability on the North Coast, and the lack of the shoreline access in the event of a tanker accident.

The North Coast is rich in natural resources. North Coast bays, estuaries and other tidal inlet areas provide a variety of habitats supporting many species of resident and migratory wildlife. Humboldt Bay is especially important. It is second only to San Francisco Bay in the variety and numbers of wildlife species which use it annually (Monroe, 1973). Humboldt Bay National Wildlife Refuge was established in 1989 in recognition of the area's unique fish and wildlife values.

## ANNEX E AREA ASSESSMENTS

### APPENDIX II AREA COMMITTEE ORGANIZATION

#### TAB A AREA COMMITTEE MEMBERS

The Chairman of the Area Committee is the Captain of the Port (Commanding Officer, Coast Guard Marine Safety Office, San Francisco Bay). The Vice-Chairman is the Administrator, Office of Oil Spill Prevention and Response, California Department of Fish and Game. The Area Committee is comprised of both members and advisors. Members of the Area Committee are defined as members of Federal, State or Local Government agencies, while advisors are those entities other than the government such as industry representatives, marine pilots, fishermen, cleanup contractors, environmental groups, academia, and interested citizens. The distinction between members and advisors has been made only as a formality to identify ~voting~ versus “non-voting” membership. The Area Committee recognizes the value of both members and advisors and has chosen to include both on one list.

#### NORTH COAST AREA COMMITTEE MEMBERS/ADVISORS

##### FEDERAL AGENCIES:

Coast Guard Marine Safety Office San Francisco Bay (Chair)  
Coast Guard Group/Air Station Humboldt Bay  
Coast Guard Station Humboldt Bay  
Coast Guard Auxiliary  
Coast Guard Reserve Unit Humboldt Bay  
Coast Guard DII(dpa-nr) Public Affairs  
Coast Guard PACAREA-RETREP IX (Pe)  
Bureau of Indian Affairs, Klamath  
U.S. Army Corps of Engineers  
U.S. Fish and Wildlife Service, Northern California Region  
NOAA-Scientific Support Coordinator

##### FEDERAL TRUSTEES:

National Marine Fisheries, Southwest Region  
Humboldt Bay National Wildlife Refuge  
Redwood National Park  
National Park Service, Redwood National Park  
U.S. Geological Service

##### STATE AGENCIES:

California Department of Fish and Game (DFG), Office of Oil Spill  
Prevention and Response (OSPR) Administrator  
Cal Dept of Health Services, Toxic Substance Control  
Cal Office of Emergency Services (OES), HAZMAT Division  
State Lands Commission  
Joint CCC/BCDC Oil Spill Program

California Conservation Corps  
California Coastal Commission  
Regional Water Quality Control Board  
Bay Area Air Quality Management District  
California Highway Patrol  
CALTRANS, HAZMAT Spills Coordinator

STATE TRUSTEES:

California Department of Parks and Recreation.  
Regional Water Quality Control Board, #2

COUNTY GOVERNMENTS/AGENCIES:

Del Norte County Rural Human Services  
Humboldt County OES  
Humboldt County Sheriff Dept  
Mendocino County OES  
City of Arcata, Environmental Services  
City of Eureka, Eureka Fire Dept  
City of Point Arena  
City of Fort Bragg, Fort Bragg Fire Protection Authority

LOCAL CONTINGENCY PLAN GRANT PROGRAM CONTRACTORS:

Del Norte County, Rural Human Services  
Humboldt County Environmental Health  
Mendocino County, OES

PORT AUTHORITY/PILOTS:

Crescent City Harbor District  
Humboldt Bay Bar Pilots  
Humboldt Bay Harbor, Recreation, & Conservation District  
Noyo River Harbor District

MARINE INDUSTRY/SHIPPING COMPANIES:

West Coast Shipping, Inc.

FACILITIES:

Chevron Eureka  
Louisiana Pacific  
Pacific Gas & Electric  
UNOCAL  
L & M Renner

ENVIRONMENTAL INTERESTS:

North Coast Environmental Center  
North Coast Marine Mammal Center  
Center for Marine Conservation  
International Bird Rescue and Research Center  
Marine Mammal Center  
Natural Resources Defense Council  
Sierra Club  
Audubon Society - Redwood Region

#### CLEANUP COOPS/CONTRACTORS/PRODUCTS

Humboldt Bay Response Corporation (formerly Pacific Affiliates)  
Pacific Link Environmental  
Clean Bay, Inc  
Marine Spill Response Corporation  
W Chabot and Associates  
Aquatics Unlimited  
Burlington Environmental Services

#### FISHERMEN'S ORGANIZATIONS

Coast Oyster Co  
Coast Seafoods  
Humboldt Fisherman's Marketing Association  
Kuiper Mariculture, Inc  
Northbay Shellfish Co  
Fishermen's Marketing Association  
Trinidad Bay Fisherman's Marketing Association

#### ACADEMIA

Humboldt State University  
College of the Redwoods  
Nansen College  
University Of California, Davis

#### SALVAGE

Systems Engineering Assoc Co (SEACOR)  
Tageson Marine Consulting

#### TAB B SUBCOMMITTEE TITLES AND MEMBERS

For the first revision of this plan, 4 subcommittees, listed below, were formed to address specific missions and goals developed for this planning cycle by the North Coast Area Committee

#### NORTH COAST AREA SUBCOMMITTEES

Environmental Sensitivity Response Strategy/Response Resources

California Department of Fish & Game, Office of Oil Spill  
Prevention and Response (OSPR) (CHAIR)  
Coast Guard Marine Safety Office, San Francisco Bay  
US Fish and Wildlife Service  
NOAA-Scientific Support Coordinator  
Humboldt Bay National Wildlife Refuge  
Marine Spill Response Corporation  
Humboldt Bay Response Corporation  
Pacific Link Environmental  
Joint CCC/BCDC Oil Spill Program  
University of California, Davis  
California State Parks  
Redwood National Park  
Del Norte County Rural Human Services

Del Norte County Sheriffs Office  
Mendocino County OES  
Crescent City Harbor District  
Crescent Coastal Research Nansen College  
Humboldt Bay Harbor, Recreation, & Conservation District  
City of Arcata  
City of Point Arena  
City of Fort Bragg  
Albion Volunteer Fire Department

#### Economic Significance

Coast Guard Marine Safety Office, San Francisco Bay (CHAIR)  
California Department of Fish & Game, Office of Oil Spill Prevention and Response  
(OSPR)  
Del Norte County Rural Human Services  
Del Norte County Sheriffs Office  
Humboldt County Environmental Health  
Mendocino County OES  
Crescent City Harbor District  
Humboldt Bay Harbor, Recreation, and Conservation District  
Noyo River Harbor District  
City of Crescent City  
City of Point Arena  
City of Fort Bragg  
City of Arcata

#### Drills and Exercises

Coast Guard Marine Safety Office, San Francisco Bay (CHAIR)  
California Department of Fish & Game, Office of Oil Spill Prevention and Response  
(OSPR)  
Humboldt Bay Harbor, Recreation, and Conservation District



Pacific Gas & Electric Chevron  
UNOCAL Humboldt Bay Response Corporation  
Marine Spill Response Corporation  
Pacific Link Environmental

Logistics/Communications/Disposal

Coast Guard Marine Safety Office, San Francisco Bay (CHAIR)  
Coast Guard Group/Air Station Humboldt Bay  
California Department of Fish & Game, Office of Oil Spill Prevention and Response (OSPR)  
Del Norte County Rural Human Services  
Humboldt County Environmental Health  
Mendocino County OES  
City of Fort Bragg

## ANNEX E AREA ASSESSMENTS

### APPENDIX III AREA SPILL HISTORY

Spill history for the North Coast Area was obtained primarily from the Coast Guard's MSIS Marine Pollution Information Product. Data was retrieved via the G-MIM Field Access Reporting System for the period 1 January 1984 through 30 June 1991. Data for the period 1 July 1991 through the present cannot be accessed and, therefore, have not been analyzed as part of the area spill history. EPA, State and local records supplied no additional data and have records that are less complete and detailed than the MSIS data.

Analysis of the spill history shows that 150 spill cases were documented during the aforementioned period for a total of 11,516 gallons. Based on these figures, the average spill size was calculated to be 77 gallons (1.8 barrels). The highest volume spill, 60,000 gallons, was not included in this average slice it would significantly skew results. The second largest spill volume, 3,000 gallons, was included, though. The majority of spills were in the 5 to 25 gallon range.

Humboldt Bay is the only harbor between San Francisco and Coos Bay with channels deep enough to permit passage of large, commercial oceangoing vessels. In 1991, Humboldt Bay received 227 commercial vessels; 104 foreign cargo ships, 42 cargo barges, and 80 chemical and petroleum vessels. Approximately 2.5 million barrels of petroleum products are delivered annually via tank barges and tank vessels to three petroleum-receiving facilities (Chevron, UNOCAL, and PG & E).

Although Humboldt Bay is the only harbor with petroleum facilities and tank vessel and tank barge traffic, it is clear that the possibility of a large petroleum spill exists along the entire North Coast. Heavy coastwise tanker traffic transits this area on runs between Alaska and the ports of San Francisco and Los Angeles. While it is recognized that the majority of this tanker traffic has voluntarily agreed to transit 50 miles off the California coast, many vessels transit much closer. Furthermore, tugs with tank barges typically do not transit 50 miles offshore when making runs between various ports along the West Coast.

Based on definitions contained in Encl(1) to COMDTNOTE 16471, the most probable and maximum most probable spill amounts for the North Coast Area would be 1.8 barrels and 71 barrels, respectively. However, the North Coast Area Committee decided not to adopt these values for the purpose of this plan. Instead, values consistent with those required in the Federal and State Vessel and Facility Contingency Plans have been selected.

These values are: (1) Most Probable Discharge, 0-50 barrels (33 barrels), (2) Maximum Most Probable Discharge, 50-2500 barrels (2500 barrels), (3) Worst Case Discharge, 40,000 barrels and (4) Discharge of Maximum Impact, 1.5 million barrels. The details of these scenarios are contained in Annex I.

## ANNEX E AREA ASSESSMENTS

### APPENDIX IV RESPONSE STRATEGIES

#### INTRODUCTION

This appendix will discuss the strategic objectives as well as the general response philosophy, strategies and countermeasures that will be applied by the Unified Command System (UCS) to discharges of oil within the boundaries of the area delineated in Appendix I of the Annex. In addition, the various oil containment, recovery and removal methods available to the UCS will also be discussed along with shoreline cleanup options that could be employed during a spill response.

#### STRATEGIC OBJECTIVES

United States Policy: In the Clean Water Act, Congress declared

“... it is the policy of the United States that there should be no discharges of oil or hazardous substance..., and that necessary actions shall be undertaken to remove discharges and eliminate the threat of imminent discharges.” This policy is reiterated to serve as a guiding light for the flow of response decisions and allocation of resources.

In support of U.S. policy, the paramount response strategy that should be implemented by the Unified Command is to allocate resources to their optimum use; i.e. the most oil recovered, contained, or prevented from being discharged per expenditure of resources. The only variance from this strategy should be considerations of safety and of particularly critical natural (environmentally sensitive) or man-made (economically significant) resources that may demand protection even though manpower and equipment may be deployed elsewhere to more efficiently recover oil. Examples of the latter may include protecting a waterfront area that may be threatened by fire or explosion if impacted, and protecting a municipality’s water supply. The priorities of strategic objectives must be carefully considered since they vary from case to case, but generally they are as follows:

Stop the Source: Typically the highest priority. When a damaged vessel(s), shoreside facility or pipeline poses a risk of an imminent major discharge, then preventative action to mitigate the size of the spill is the logical first priority, i.e. stabilize and lighter a vessel; contain and secure the shore-based source.

Open Water Containment and Recovery: Once the effort is underway to secure the source, containment and recovery of the spilled oil prior to shoreline impact is the next logical priority. Deploy major recovery vessels, boom-towing vessels and other skimmers to intercept oil before it impacts critical areas or becomes a more costly and environmentally damaging shoreline cleanup problem.

Protection of Sensitive Areas: Depending on the ability to contain and collect spilled oil prior to impact, the protection of resources can compete with containment and collection resources. Priority for protecting these areas is a function of the value of the areas, (as prioritized in the following appendix) and the feasibility of protecting them. Dedicating open water containment equipment to protecting these areas is not wise if oil that would otherwise have been recovered is merely free to strike other sensitive areas that have not been ‘prophylactically’ boomed. In general, employ tactics that do not weaken open water recovery operations; deploy resources that are not needed in the open water operations; relocate threatened wildlife by means such as capturing, or scaring with propane noise-making cannons and closing off narrow channels with sediment dikes, boom, siphon dams or other natural or man-made materials.

Shoreline Cleanup: Shoreline cleanup should be undertaken only when the risk of recontamination from

floating oil passes. Pre-cleaning the beaches of trash and debris prior to the impact of the oil can greatly facilitate the cleanup. The UC must decide if shorelines are going to be cleaned at each tidal change or just once after all the oil anticipated to reach land has come ashore.

## RESPONSE PRIORITIES

The preservation of human life and health shall be the overriding priority for any response to a discharge of oil. There are two elements to this principle; public safety and response personnel safety.

A large release of oil in the vicinity of houseboats, inhabited shoreline areas or at an oil transfer facility could pose a health or explosion hazard, especially if the discharge is in a confined area (e.g. under a dock). Benzene, hydrogen sulfide and other toxic, explosive or oxygen-displacing vapors could be generated. Evacuation of the area, even at the expense of delaying the cleanup, may be necessary until the danger has passed. Evacuation of homes or other public and private facilities, if recommended by the Unified Command (UC), is the responsibility of state and local emergency agencies.

All response personnel must comply with all applicable worker health and safety laws and regulations as discussed in Annex H. Initial response and rescue personnel, who may be underway on self-propelled skimmers and other vessels, and shoreline cleanup personnel could be exposed to health and safety risk(s). Personnel safety is paramount and responders shall comply with the guidelines set forth in Annex H of this plan and the site safety plan(s) generated by the UCS.

After the threat to personnel safety has been eliminated or reduced to safe levels, response strategies should be implemented to minimize the ecological impact and then the economic and public impact as discussed in the following section.

## PROTECTION PRIORITIES

In general, protection of the environmentally sensitive areas that could be impacted will receive a higher priority than economically significant sites. This hierarchy was established in the ranking of the environmentally sensitive sites as A, B & C and the economically significant sites as D, E, & F with the highest priority being A (See Appendix V of this Annex). However, as mentioned before, resources and sites determined to be critical to the preservation of human health and safety, such as drinking water intakes, power plant intakes and desalinization plants afford first priority, ahead of an environmentally sensitive site.

The Unified Command will make the final decision regarding protection priorities for the environmentally sensitive and economically significant areas. In order to further assist the UC, additional prioritization of equally categorized areas that could be impacted may, in the future, be included in this plan. This will allow the UC to determine which priority A sites are to be protected when initial resources will only allow the protection of a few of them.

The UC may utilize the predetermined response strategies for environmentally sensitive sites and economically significant sites. The UC must decide which sites are in jeopardy of being oiled and the response strategy should be implemented as indicated in the response strategy site summary sheets included in Appendix V. However, the UC and the responders should remain flexible and be receptive to additional information when instituting the booming plan or other countermeasures. Factors such as unusually high winds, strong tidal currents or freshets, equipment limitations, bottom conditions and the type of oil can have a significant effect on the proposed strategy. Modifications to the preplanned strategies should be expected.

In addition to the seasonal variances, the protection priority of an entire area could be changed. For example, if the SSC or a DFG biologist determine that a certain section of marshland or coastline, previously categorized as a lower priority (or not categorized at all), is currently a breeding ground for an endangered species, then protection of that site may be afforded the utmost priority even at the expense of a previously categorized A site located adjacent to it.

## RESPONSE POLICY AND THE UNIFIED COMMAND SYSTEM

The Unified Command (UC) structure allows for a coordinated response effort which takes into account the federal, state, local and responsible party concerns and interests when implementing the response strategy in accordance with the National Response System and the National Contingency Plan (NCP).

The size and the complexity of the UCS will be proportionate to the size of the discharge. For oil discharges which approximate the size of the area's most probable or average discharge, the UC could total 3-4 members; the responsible party, 2 USCG Pollution Investigators (representing the FOSC), and a Department of Fish & Game OSPR warden (representing the State of California). The discovery, preliminary assessment, containment, cleanup, removal, disposal and investigation phases of the response could be executed by a UC of this size. The majority of the oil spill responses that occur in California are completed at this level.

Responses to discharges which exceed the most probable discharge, and approach the quantity of the maximum most probable discharge up to the worst case discharge, require a larger more supportive UCS. All four sections of the UCS would certainly be established for a spill of this size. Major discharges of oil, such as the complete loss of a tanker's cargo along the California's coast, would probably be classified by the Commandant as a Spill Of National Significance (SONS). See Annex A, Appendix V, Tab H for more information on the SONS structure.

## RESPONSE PHASES

The response and the formation of the UCS will occur in phases. Response checklists, included in Annex J, Appendix II, Tabs A through G, detail the actions necessary to create the full UCS and ensures the UC addresses all of the key elements in a proper oil spill response.

Notification, Initial Assessment and Response: After receiving word of a significant discharge, the response agencies and personnel shall follow the guidelines set forth in Tabs A & B of Appendix II to Annex J. These guidelines will facilitate the creation of the UCS' Command Staff and direct responders towards accomplishing the goals established for the first two hours of the response; completing the notifications, securing the source, initiating the organization, activating response equipment (especially self-propelled skimmers), assessing the situation, gathering and managing information and identifying trajectories and initial impact areas.

Containment, Countermeasures and Recovery: The next phase of an oil spill response involves the formation of the four major sections of the UCS; Operations, Planning, Logistics and Finance. The checklist included in Tab C lists the actions necessary to mobilize personnel and equipment for the response. The Operations and Logistics sections are the most heavily tasked during this phase.

During this early part of the response, which primarily takes place over the first two days, the UCS will establish a command post, determine staging areas and amounts of resources needed, deploy protective countermeasures at environmentally sensitive and economically significant sites that will be impacted and form overall open water and nearshore response strategy. Depending on the situation, the Emergency

Operations Branch will carry out emergency response operations such as search and rescue, firefighting, salvage and lightering.

As this phase matures, there will be an increased focus on the containment, recovery and cleanup of the discharged oil. The UCS should be fully functional and the Planning Section of the UCS become more active, developing tactical objectives and preparing a daily Incident Action Plan. Additional response goals include further deployment of pollution countermeasures, shoreline cleanup, wildlife recovery and rehabilitation, monitoring and adjusting strategies, recovery and interim storage of oiled product.

Documentation and Cost Recovery: The documentation and cost recovery requirements of the NPFC and the regulations, are detailed in the checklist making up Tab D. This phase may be concurrent with other phases of the response and is important since the NPFC will use it to recover costs incurred by the Coast Guard and paid to its contractors from the OSLTF. The State of California must also maintain complete documentation for similar reasons.

Removal and Waste Disposal: The checklist included in Tab E details the necessary actions required during the removal, transportation, final storage and eventually the disposal or recycling of the recovered product.

Secure Operations: The checklist in Tab F provides guidance and information the UCS can consider when the cleanup is nearly complete. Issues such as personnel and equipment demobilization, vessel and equipment cleaning and natural resource damage assessment need to be addressed at the final stages of the cleanup.

## DEFENSIVE ACTIONS AND COUNTERMEASURES

Introduction: Oil spill response countermeasures can be classified into four categories: mechanical offshore pickup, alternative countermeasures (chemical treatment, in-situ burning, etc.), shoreline removal or no action. Mechanical offshore removal of the oil is preferred. If not picked-up, spilled oil may present a continuing, long-term threat to the environment and living natural resources. Treatment of discharged oil with chemical agents or taking no action does not remove the oil or the threat it presents to the environment. However, particular spill circumstances may narrow the choices. Generally, a combination of the various techniques will be used in oil spill response. After an oil spill occurs, defensive actions should begin as soon as possible to prevent, minimize, or mitigate threat(s) to public health or welfare and to the environment.

Level of Response Required: As an overall operational rule, it shall be the policy of the UC to mobilize enough assets and resources to ensure a maximum response and mitigation of an incident in the shortest possible time. Simply stated, when in doubt, an “over response” of resources will be the preferred option when compared to an inadequate initial response resulting from incomplete or insufficient information. **Mobilized equipment and personnel can always be demobilized if not needed, however, critical time lost during the initial phases of the response can not be recovered.**

Fire and Explosion: All discharges or potential discharges of combustible or flammable cargoes are inherently subject to the risk of fire or explosion. Evaluation of this risk will be one of the primary responsibilities of the initial assessment team sent to the damaged vessel, facility or pipeline. If a vessel or a facility is involved in a major fire, it is probable that the fire will have to be extinguished before an attempt is made to secure the source of discharge or conduct any containment or cleanup in proximity to the fire.

In general, the USCG Captain of the Port is the Incident Commander for any fire aboard a vessel that is at anchor or underway. The local fire department will be the Incident Commander for a vessel that is moored

to a pier. Spill response operations, if conducted, will be coordinated with the fire fighting effort using the information contained in Tab L, Appendix II of Annex J of this plan and the USCG Captain of the Port's Marine Firefighting Contingency Plan (MFCP). The Operation's Section Emergency Response Branch will be responsible for integrating the firefighting operation into the Unified Command System.

Vessel Salvage Operations: Salvage efforts for vessels that have allided, collided, grounded or sunk have been divided into three phases: stabilization, refloating and post-floating. Guidance and further discussion on vessel salvage operations is contained in Tab M, Appendix II of Annex J of this plan. The Operation's Section Emergency Response Branch will be responsible for overseeing or conducting the salvage operations. They will be assisted by the U.S. Navy's Supervisor of Salvage, personnel from the USCG Marine Safety Center, USCG Strike Team members and MSO inspectors.

Special consideration for the vessel's stability and structural integrity must also be exercised during any actions taken to stop or mitigate the source of the discharge such as an internal cargo transfer or lightering. Intentional grounding of a stricken vessel as a mitigation technique for reducing or eliminating the discharge of oil should only be used as a last resort when it is positively known that a greater discharge or the loss of an entire tank vessel will be prevented.

Containment of Oil at the Source: The use of containment resources, primarily boom, at the source of the discharge may be an effective countermeasure depending on the weather, sea and tidal current condition, type and volume of oil. However, in certain circumstances, it may be a more efficient and appropriate use of resources if they were applied to the open water recovery or resource protection mission of the cleanup. This decision must be weighed against the appearance that inadequate action is taking place at the source of the discharge, especially if the vessel, facility or pipeline is still discharging oil. In some circumstances it may be advisable not to contain the discharged oil alongside the vessel or facility due to a potential increase in a fire, explosion or personal health hazard.

## ALTERNATIVE COUNTERMEASURES

Introduction: Alternative countermeasures available to the UC are discussed extensively in Annex G of this plan. A dispersant checklist is also included. The primary objective of an oil spill response is to reduce the effect of spilled oil on the environment. Physical removal of the oil is the preferred method. However, conventional mechanical recovery and removal may be limited by equipment capability, weather and sea conditions, the size and the remote location of the spill.

Policy: The use of alternative countermeasures; dispersants, bioremediation, in-situ burning and shoreline cleaning agents shall be considered when the preferred recovery, cleanup or remediation techniques are inadequate and the environmental benefit of their use outweighs any adverse effects.

Use of dispersants or in-situ burning will be the primary consideration for any large offshore discharges of oil where open water skimming operations may be difficult or where open water recovery could not occur before the oil impacted any of the environmentally sensitive areas located offshore such as the Farallon or Channel Islands.

Since the approval process for use of alternative countermeasures is historically prolonged and sometimes complex, the decision to apply time-critical alternative methods, such as dispersants and in-situ burning, needs to be made early in the response. Annex G discusses the approval process for each one of the countermeasures. The approval process varies with the type of countermeasure and the location of the spill (inland, nearshore, offshore) and in most cases, requires the involvement of the Regional Response Team



and the State of California.

Chemical Dispersants: With certain oil types and under conducive weather conditions, chemical dispersants can enhance dispersion of oil in water. This action must be taken before the oil spreads widely and weathers appreciably; chemical dispersants do not work well once the oil thickness over water has decreased or a water-in-oil emulsion forms. Moreover, chemical dispersion does not constitute removal of the oil and dispersant treatments are not entirely effective. While some oil will be dispersed in the water column where the fate of both the oil and the chemical dispersant remains unknown, much of the treated oil will remain on the water's surface to threaten sensitive natural resources. This un-dispersed oil may still require surface containment and recovery operations in order to minimize environmental injury and loss.

In-Situ Burning: Setting fire to the discharged oil is another option. Burning oil will remove larger quantities of oil from the water's surface and in a shorter period of time than any other response countermeasure. Burning, of course, is not an option if it could jeopardize lives or could exacerbate the spill (i.e. set fire to a tanker casualty with oil still onboard). Burning must be done before the oil spreads and weathers. It will only work when the oil layer is relatively thick (greater than 3 mm) and fresh.

## OIL CONTAINMENT METHODS AND STRATEGIES

Before spilled oil can be effectively recovered, the spreading of the oil must be controlled and the oil contained in an area accessible to oil recovery devices. In this section various oil containment strategies are discussed. Generally, spilled oil is contained using oil containment boom. Typical boom has a flotation section that provides a barrier on and above the water surface and a skirt section that provides a barrier below the water surface. The physical dimensions of the boom to be used for a particular spill will be dependent on local conditions. In the open ocean it may be necessary to use a boom that is several feet tall. In a protected marsh, a boom that is only a few inches tall may be appropriate.

There are limitations on the effectiveness of any boom. Oil will be lost if the conditions are such that there is splash-over from breaking waves. Oil will also be carried under the boom if it is deployed in such a way that currents cause the oil to impact the boom with a velocity perpendicular to the boom of greater than 0.7 knots. Once a boom has been deployed, it may be necessary to reposition it due to changing tides and currents. It is desirable to have personnel available to readjust the boom as required. In all cases of boom deployment, consideration must be given to protecting the safety of those involved in the activity.

Open Water Containment: Oil spilled on open water is normally contained using boom. The boom will be deployed using vessels that will tow the boom around the perimeter of the oil spill. The type of boom to be deployed will depend on local conditions, including sea state, tides, currents and wind. To be most effective, booming on open water must be done as soon as possible after a spill.

Protective Booming: The goal of most oil containment and recovery strategies is to collect the spilled oil from the water and prevent it from reaching sensitive resources. Frequently, however, this is not possible and sensitive resources are oiled in spite of response efforts, especially during large oil spills. Often the goal will be to minimize environmental injury using a variety of booming, containment and recovery techniques. The following are techniques that can be implemented by the Booming Branch of the UCS' Operations section for containing spilled oil on water or as a means to direct it away from sensitive natural resources or cultural amenities. Shoreline cleanup and treatment methods are discussed in more detail later in this appendix.

Exclusionary booming is performed prior to the advance of the oil and is used to prevent or exclude oil from

entering a harbor inlet, slough, marsh or estuary. Either skirted or sorbent boom can be used for this type of booming. Factors that need to be considered are: type and size of boom, natural outflow of the body of water, wind, tide and currents or a combination of both.

These factors can be predetermined by establishment of a priority system, training and local knowledge of underwater topography, weather conditions and boom anchoring capabilities. It is important to remember that the boom needs to be tended and monitored as weather and tidal conditions can change.

Diversionary booming should be set so that oil movement is reduced to under 0.7 knots. This can be accomplished by angling the boom in relation to the current's direction, reducing the velocity of the floating oil in relation to the boom. Diversionary or deflection booms can be set up in series along a waterway to increase their effectiveness. As stated before, the boom(s) needs to be tended and monitored as weather and tidal conditions can change.

Containment booming is used to prevent spreading and to concentrate the oil so it can be skimmed or vacuumed. Factors that need to be considered are: type and size of boom required for weather, winds, tides and currents in the vicinity of potential spill areas; the type of deployment vessel needed; the amount of boom needed for effective containment and available skimming capabilities. Fixed or natural anchor points should be selected. These factors can be predetermined by emphasizing worst case spill scenarios and using local knowledge of weather and sea conditions.

Sorbent booming is useful when the amount of oil is minimal, when tides and currents are light, or when shorelines require protection. Heavier oil can be recovered using absorbents (oil "sticks" to material) and lighter fuels generally are recovered using absorbents (sausage, sweep, or diapers). Sorbent booming can also be used as a backup for other types of booming to recover product that may have entrained past the primary barrier.

Factors that need to be considered are: wind and wave action; type of sorbent required, i.e., rocky or sandy shoreline, marsh area, etc.; and type and viscosity of product to be recovered.

Berms and Dams: Coastal shores are barriers to spreading oil. Temporary berms, dikes and dams can also serve as effective barriers against oil contamination of sensitive natural resources and economic amenities. Berms, dikes and dams are simply another form of booming and are subject to the same environmental stresses. The appropriate protection technique for a particular shore depends on several factors:

- water body type (open water, bay, tidal channel, inlet)
- water current velocity
- water depth
- wave height
- shore type (sand, gravel, boulder)

Generally, sediment berms, dikes and dams will most often be used to protect small coastal inlets or perhaps tidal channels serving wetlands and marshes when these channels are accessible. The object of berms, dikes and dams is to keep oil outside an inlet because there are often abundant natural resources and economically significant areas that use the sheltered waters of bays and estuaries within. Occasionally, dikes and dams have been used across a channel to contain the oil within a portion of marsh in order to prevent widespread contamination of other resources.

Dikes and dams are not practical when currents are great, waters are deep and waves are large. Also,

beaches with abundant sand are generally the most suitable for building dikes and dams. Berms can be built above the active beach face to prevent oil contamination of high beach during spring tides. Alternative strategies should be prepared and the necessary supplies and equipment in place should a berm, dike or dam fail.

## OIL REMOVAL AND RECOVERY

Introduction: Oil spilled in open water spreads quickly and weathers rapidly. Often, rough wind and sea conditions will be contributing factors to the cause of the spill and these same conditions will preclude response and deployment of surface equipment or minimize their effectiveness. Such conditions may cause the oil to be dispersed in the water column, evaporated into the atmosphere, and/or transported away from sensitive areas and resources. These conditions may prescribe a decreased response with an action plan that allows a natural “weathering and cleansing” process. If possible, however, an active response must be undertaken in order to remove oil from the environment and thereby reduce the threat to sensitive natural resources.

Mechanical control and recovery countermeasures are most effective immediately after a spill when the oil is in a thick layer, and covers a small area. Booms and skimmers are most effective in calm waters but can work during moderate weather and sea conditions. However, when the ocean is rough, booms and skimmers become ineffective.

The On-Water Recovery Branch is in the Operations Section of the Unified Command System. The On-Water Recovery Branch reports to the Operations Section Chief. Major responsibilities are as follows:

- Implement assigned portion of spill action plan to contain and recover spilled oil.
- Request needed resources and assign to group supervisors.
- Maintain ship-to-shore communications.
- Provide situation and resource status information to the Operations Section Chief.
- Coordinate activities with Shoreline Cleanup and Booming Branches if necessary.
- Report events and accidents to Operations Section Chief.
- Evaluate performance of containment and recovery equipment.
- Participate in strategy development which involve coordination with the Planning and Logistics Sections.

Offshore/Open Water Operations: Oil removal/recovery in open water is accomplished through the use of skimming devices once the oil has been contained. Skimmers can be freestanding in which the skimmer is a separate piece of equipment which pumps the oil-water mixture from the contained surface into tanks on a vessel. These skimmers are usually driven by hydraulic units on board a vessel. Self-propelled skimmers have a skimmer as an integral part of the vessel. The skimming vessel positions itself at the head of a concentrated or contained pool of oil and recovers the oil into tanks on board the vessel. There is also a type

of skimmer in which the weir or collection zone of the skimmer is an integral part of the boom which is in contact with the oil. The pumping and oil collection is done on the vessel which is close to the weir skimmer.

“Vessels of opportunity”, such as fishing vessels, may be used to deploy or tow boom and, depending on their size, be equipped with skimming equipment. They need to have adequate deck space and lifting cranes to carry the necessary equipment. The Coast Guard’s Vessel of Opportunity Skimming System (VOSS) could be deployed on a variety of vessels.

To be most effective, oil spill recovery equipment must be directed to the location of the thickest oil accumulation. Observers on vessels at water level are unable to see a vast area and are unable to recognize the most optimum skimming locations. Skimming activities are best directed by trained observers aloft in helicopters. One observer may be able to direct several skimming units to optimum skimming locations. During hours of darkness or poor visibility, tracking devices that emit radio location signals can be placed in the spilled oil to trace the oil movement. Remote sensing systems have been developed which can track oil movement even in darkness and poor visibility. The sensor is mounted in an aircraft that overflies the spill area. The sensor systems include Side Looking Airborne Radar (SLAR), infrared and radiometric.

Nearshore/Shallow Water: Oil recovery techniques and equipment are different in nearshore/shallow water locations than open water. Shallow draft vessels and smaller boom and skimmers are used in these situations. These vessels can maneuver into tight places behind and under wharfs or in sloughs and can actually skim next to shore in many nearshore locations.

Strategies for nearshore cleanup can differ depending on the depth of the water and the location. Nearshore operations, within a bay or inlet, will also require shallow draft vessels, workboats and skimmers. However, the vessels may only be operable at high tide. At or near low tide, the operation may evolve into a shoreline cleanup operation. Any boom towing boats or skimmers must be able to withstand going aground without sustaining major damage.

Coastal shallow water or nearshore strategies will differ in certain respects. In addition to the need for small, shallow draft vessels, specialized vessels such as kelp cutters and harvesters may also be needed. California’s rocky coast can make nearshore operations difficult and even dangerous during high surf and winter conditions. Once again, the safety of personnel involved in these operations is the Unified Command’s paramount concern.

## SKIMMERS

Weir Skimmers: These skimmers recover oil by aligning a barrier just below the surface of the water and having oil floating on the water surface pass over the weir into a recovery box or into a pump. Weir skimmers are not the most efficient recovery systems because a large amount of water is usually collected along with the recovered oil.

Vortex Skimmers: In a vortex skimmer, a turbine-like fan, mounted below the surface, is used to create a current which draws in oil floating on the water. It is then pumped to a collection tank. The device is mounted on a vessel or floats at the water surface.

Sorbition/Oleophilic Skimmers: This type of skimmer uses materials that will retain a high percentage of oil minimizing the amount of water collected with the oil. The skimming devices can be belts, ropes, brushes or discs that come in contact with the oil. The device then will either wring or scrape the oil from the material

into a collection point for removal to a storage tank.

Suction Skimmers: These devices operate in conjunction with a pump that draws liquid into the skimming device. The skimmer head generally floats on the water with an oil/water mixture being drawn into the skimmer. A typical application would include a skim head used with a truck mounted vacuum system.

## DREDGES

Suction dredges are rarely used to recover oil or oiled sediments from the bottom of a water body because oil usually does not sink or, if it does, the amount is small and not recoverable. There are exceptions, however. Whether an oil sinks or floats depends primarily on the specific gravity of the oil and the temperature and salinity of the water. Oil may also sink once it is absorbed to exposed sediment like sand or gravel, which is subsequently mobilized and redeposited in deeper water.

If dredging is considered as a recovery technique, there must be provision for containment and storage of large quantities of water recovered along with the oil or oiled sediment. A large quantity of oil contaminated water can present significant storage, transport, and disposal problems which must be resolved before the activity is begun. These problems can be diminished if oil/water separation is provided, and decanting of water back to the containment area is allowed by state and federal agencies.

Dredging can be coupled with low-volume, low pressure washing of the bottom to direct the sunken oil down-gradient to some collection point where the accumulated oil can be recovered by a dredge. Currents and flow patterns may cause the sunken oil to naturally collect in low spots that can serve this same purpose. The use of a hopper barge's inverted draghead as a weir skimmer was fairly successful in Prince William Sound and could be employed in calm seas.

## VACUUM TRUCKS

Vacuum trucks are frequently essential equipment for cleanup of oil spills. A hose is extended from the truck to the oil collection or containment site to pick up the oil. If the oil is floating on water, the suction hose can be connected to a "duck bill" nozzle which has a long horizontal slot to allow the oil to be picked up while minimizing the amount of water collected. A weir-type skimmer can also be connected to the suction hose to suck the thin layer of oil from the surface and minimize the amount of water collected at the same time. Both methods require a full-time attendant to adjust the equipment and clear debris.

Vacuum trucks work best when the oil layer is thick. If there is only a thin layer of oil on the water, much more water will be collected than oil. Recovery of a large quantity of water can make a vacuum truck operation very inefficient because the tank will quickly fill with water and little oil. Transport and disposal costs increase as a result. The operation can be made more efficient if the oil/water mix recovered is allowed to separate in the tank and the water decanted back to the containment area. Decanting must be approved by state and federal agencies.

## SHORELINE CLEANUP

Shoreline Types: The most obvious differences between shorelines along the California coast are due to their geomorphology. These geomorphological differences are caused by their exposure to different quantities of water and wind driven forces of shoreline energy (specifically waves and currents) and the shoreline type (substrate, grain size, tidal elevation, origin). The geomorphology and the degree of exposure to waves and currents combine to influence the plants and animals that inhabit the intertidal and shallow subtidal

areas of the shoreline and the natural persistence of stranded oil. It is these same factors that provide the criteria to determine the appropriate shoreline cleanup techniques.

These concepts were the basis for development of the Environmental Sensitivity Index (ESI) by the Research Planning Institute (RPI), which ranks shorelines according to their sensitivity to oiling and shoreline cleanup activity. The ESI provides a useful first step in the design of contingency plans because it enables the ready identification of priority areas for protection from oiling and determination of appropriate shoreline cleanup methods during response activities. Summarized, the ESI ranges from 1 (least sensitive to oil) to 10 (most sensitive to oil). Detailed descriptions of the ESI shoreline types and likely oil impacts can be found in the National Oceanic & Atmospheric Administration (NOAA) Shoreline Countermeasures Manual.

Shorelines types are ranked as follows:

RANK	SHORE
1	Exposed wave-cut cliffs; exposed seawalls & piers.
2	Exposed wave-cut platforms.
3	Fine to medium-grained sand beaches.
4	Coarse grained sand to gravel beaches.
5	Mixed sand and gravel beaches.
6	Gravel beaches and riprap structures.
7	Exposed tidal flats.
8	Sheltered rocky shores and man-made structures.
9	Sheltered tidal flats.
10	Salt marshes.

Shoreline Cleanup: Under certain conditions it will be appropriate to take actions to remediate the effects of stranded oil on shorelines. Other conditions may dictate that no actions should be taken. The primary goal of the implementation of any shoreline countermeasure is the removal of oil from the environment with no further injury or destruction to that environment. A list of the 22 different countermeasures is provided. These 22 countermeasures, including no action, have been evaluated for the appropriateness of their use on four different major categories of oil (very light, light, medium, heavy) stranded on ten shoreline types. The results of these evaluations are presented on four matrices attached at the end of this appendix. Each matrix contains a written explanation for its use and further description of the categories of oil. These matrices are intended to be used as a planning guide by the Shoreside Cleanup Branch of the Operations Section.

The countermeasures listed may not be the best for use under all possible circumstances, and multiple countermeasures may need to be used on the same shoreline. Selection of specific countermeasures for use during a spill response will be based on the properties of the stranded oil, the degree of contamination, the shoreline type, and the presence of sensitive natural resources. The Federal On-Scene Coordinator or the State On-Scene Commander have the authority to select or approve specific countermeasures for use during an oil spill response.

Potential Shoreline Treatment Methods: The following section lists and describes those techniques which may be required for use during a shoreline cleanup. Methods and equipment currently in use for these shoreline treatment methods are described in more detail in the Shoreline Countermeasures Manual. These methods, when used according to the guidelines in this document, may be used on most sites as part of the UC-directed response. It should be noted that methods 13 through 19 will require special consideration and authorization by the natural resource trustee prior to commencement of work. The trustee agency(s) for fish and wildlife resources will make the final recommendations to the Unified Command on which

specific method(s) to employ on a case-by-case basis. Regardless of this decision, contingency plans should provide for an array of identified methods to be used. Currently approved methods are:

1. No Action
2. Manual Removal
3. Passive Collection (Sorbents)
4. Debris Removal with Heavy Equipment
5. Trenching (Recovery Wells)
6. Sediment Removal
7. Cold Water Flooding (Deluge)
8. Cold Water Washing
  - a. Low Pressure (<50 psi)
  - b. High Pressure (50-100 psi)
9. Warm Water Moderate/High Pressure Washing
10. Hot Water/High Pressure Washing
11. Slurry Sand Blasting
12. Vacuum
13. Cutting Vegetation

Potential Shoreline Treatment Methods (cont'd):

14. Chemical Treatment
  - a. Chemical Oil Stabilization
  - b. Chemical Protection of Beaches
  - c. Chemical Cleaning of Beaches
15. In Situ Burning
16. Nutrient Enhancement
17. Microbial Addition
18. Sediment Reworking
19. Shoreline Excavation, Cleansing and Replacement

A description of each shoreline cleanup method is discussed below:

1. NO ACTION

Objective: No attempt to remove any stranded oil, in order to minimize impacts to the environment or because there is no proven effective method for cleanup.

Description: No action is taken except for monitoring of conditions.

Applicable Shoreline Types: Can be used on all shoreline types.

When To Use: If the shoreline is inaccessible, or when natural removal rates are very fast, or cleanup actions will do more harm than leaving the oil to be removed by natural forces.

Biological Constraints: This method may be inappropriate for areas where high numbers of mobile animals (birds, marine mammals, crabs, etc.) use the intertidal zone or adjacent nearshore waters.

Potentially Adverse Environmental Effects:

Intertidal - The same as the oil.

Subtidal - The same as the oil.

## 2. MANUAL DEBRIS REMOVAL

Objective: Removal of stranded surface oil with hand tools and manual labor.

Description: Removal of surface oil and oily debris by manual means (hands, rakes, shovels, etc.) and placing in containers for removal from the shoreline. No mechanized equipment is used.

Applicable Shoreline Types: Can be used on all shoreline types.

When To Use: Generally used on shorelines where the oil can be easily removed by this non-mechanical means. Most appropriate for light to moderate oiling conditions.

Biological Constraints: Foot traffic over sensitive areas (shellfish beds, algal mats, bird nesting areas, dunes, etc.) is to be restricted. There may be periods when shoreline access is restricted (e.g., bird nesting, mammal pupping).

Potentially Adverse Environmental Effects:

Intertidal - Minimal if surface disturbance by cleanup activities and work force movement is limited.

Subtidal - None.

## 3. PASSIVE COLLECTION (SORBENTS)

Objective: Removal of oil by sorbtion onto oil attracting material placed in the intertidal zone.

Description: Sorbent material is placed on the surface of the shoreline substrate allowing it to absorb oil as it is released by tidal or wave action. Oil removal is dependent on the capacity of the particular sorbent, energy available for lifting oil off the shoreline, and degree of weathering.

Applicable Shoreline Types: Can be used on any shoreline type.

When To Use: When the shoreline oil is mobile and transport of oil is expected on or off the site. The oil must be of a viscosity and thickness to be released by the substrate and absorbed by the sorbent. Often used as a secondary treatment method after gross oil removal, and along sensitive shorelines where access is restricted.

Biological Constraints: None, although this method can be slow thus allowing oil to remain in critical habitats during sensitive periods of time.

Potentially Adverse Environmental Effects:

Intertidal - None, except for the amount of oil remaining on the shoreline after the sorbents are no longer effective.

Subtidal - None.

## 4. DEBRIS REMOVAL WITH HEAVY EQUIPMENT



Objective: Removal of contaminated debris and logs.

Description: Mechanical removal and appropriate legal disposal of debris from the upper beach face and the zone above high tide beyond the normal wash of waves. Can include cutting and removal of oiled logs.

Applicable Shoreline Types: Can be used on any shoreline type, where safe access is allowed.

When To Use: When driftwood and debris is heavily contaminated and, either a potential source of chronic oil release, an aesthetic problem, or a source of contamination of living resources on the shoreline.

Biological Constraints: Disturbance to adjacent upland areas should be minimized. Traffic over sensitive intertidal areas (shellfish beds, algal mats, bird nesting area, dunes, etc.) is to be restricted. There may be periods when shoreline access is restricted (e.g. bird nesting, mammal pupping).

Potentially Adverse Environmental Effects:

Upland areas - Could be degraded by heavy equipment.

Intertidal & Subtidal - None - if above constraints are followed.

## 5. TRENCHING (RECOVERY WELLS)

Objective: Remove subsurface oil from permeable substrates.

Description: Dig trenches to the depth of the oil and remove oil floating on the water table by vacuum pump. Water flooding or high pressure spraying at ambient temperatures can be used to flush oil to the trench.

Applicable Shoreline Types: Can be used on beaches ranging in grain size from fine sand to gravel.

When To Use: When large quantities of oil penetrate deeply into permeable sediments and cannot be removed by surface flooding. The oil must be liquid enough to flow at ambient temperatures.

Biological Constraints: Trenches should not be dug in the lower intertidal when attached algae and organisms are abundant.

Potentially Adverse Environmental Effects:

Intertidal - On gravel beaches, there may be a period of beach instability as the sediments are redistributed after the trenches are filled in. Subtidal - None.

## 6. SEDIMENT REMOVAL

Objective: Removal of surface oiled sediments.

Description: Oiled sediments are removed either manually or mechanically. The oiled material must be transported and disposed of off-site.

Applicable Shoreline Types: Can be used on any shoreline with surface sediments. On rocky coasts, only manual removal is feasible. Equipment is to be used only on beaches, with special supervision to minimize sediment removal.

**When To Use:** When only very limited amounts of oiled sediments have to be removed. Should not be considered where damaging beach erosion may result. Care should be taken to remove the sediments only to the depth of oil penetration, which can be difficult with heavy equipment.

**Biological Constraints:** Mechanized equipment may be restricted when sensitive habitats are adjacent to the target area of operations (e.g., stream mouths, tidal flats, marshes, or dunes).

**Potentially Adverse Environmental Effects:**

**Upland -** Positioning of heavy equipment could affect sensitive areas.

**Intertidal -** The equipment is heavy and required support personnel is extensive. May be detrimental if excessive sediments are removed without replacement. All organisms resident in the beach will be affected, though the need for removal of the oil may be determined to be the best overall alternative.

**Subtidal -** Oil and fine-grained oily sediments may be released to the water during sediment removal activities and tidal flushing of the excavated beach surface.

## **7. COLD WATER FLOODING (DELUGE)**

**Objective:** To wash surface oil and oil from crevices and rock interstices to water's edge for collection.

**Description:** A large diameter header pipe is placed parallel to the shoreline above the oiled area. A flexible perforated header hose is used during deluge of intertidal shorelines to better conform to their profiles. Ambient seawater is pumped through holes in the header pipes and flows down the beach face to the water. This action simulates the flushing action that would result from tidal action. On porous beaches, water flows through the substrate pushing loose oil ahead of it (or floats oil to the water's surface) then transports the oil down slope for pickup. Flow is maintained as long as necessary to remove the majority of free oil. Oil is trapped by booms and picked up with a skimmer or other suitable equipment.

**Applicable Shoreline Types:** Beaches with sediments coarser than sand, and gently sloping rocky shorelines. Generally not applicable to mud, sand, vegetated, or steep rocky shorelines.

**When To Use:** On heavily oiled shorelines when the oil is still fluid and loosely adhering to the substrate; and where oil has penetrated into cobble or boulder beaches. This method is frequently used in combination with other washing techniques (low or high pressure, cold or warm water).

**Biological Constraints:** Not appropriate at mouths of stream and creek. Where the lower intertidal contains rich biological communities, flooding should be restricted to tidal stages when the rich zones are under water, to prevent secondary flooding. Avoid using on mud or vegetated areas.

**Potentially Adverse Environmental Effects:**

**Intertidal -** Habitat may be physically disturbed and smothered as sand and gravel components are washed down slope. Organisms may be flushed into lower tidal zones.

**Subtidal -** Oiled sediment may be transported to shallow subtidal areas, contaminating them and burying benthic organisms.

## **8a. COLD WATER/LOW PRESSURE WASHING (<50 PSI)**

**Objective:** Remove liquid oil that has adhered to the substrate or man-made structures, pooled on the surface, or become trapped in vegetation.

**Description:** Low pressure washing with ambient seawater sprayed with hoses is used to flush oil to the

water's edge for pickup. Oil is trapped by booms and picked up with skimmers or sorbents. Can be used with a deluge system on beaches to prevent released oil from readhering to the substrate.

Applicable Shoreline Types: On heavily oiled gravel beaches, rocky coasts, riprap and seawall where the oil is still fresh and liquid. Also, in marshes where free oil is trapped.

When To Use: Where adhered oil is still fresh and must be removed due to continued release of oil to other areas.

Biological Constraints: May need to restrict use of washing to certain tidal elevations so that the oil/water effluent does not drain across sensitive low tide habitats. In marshes, use only at high tide and either from boats or the high tide line to prevent foot traffic in vegetation.

Potentially Adverse Environmental Effects:

Intertidal - If containment methods are not sufficient, contamination may be flushed into lower intertidal zone.

Subtidal - Oiled sediment may be transported to shallow subtidal areas, contaminating them and burying benthic organisms.

#### 8b. COLD WATER/HIGH PRESSURE WASHING (50-100 PSI)

Objective: Remove oil that has adhered to hard substrates or man-made structures.

Description: Similar to low pressure washing except that water pressure is up to 100 psi. High pressure spray will better remove oil that has adhered to rocks. May require placement of sorbents directly below treatment areas.

Applicable Shoreline Types: Rocky shores, riprap, and seawall. Can be used to flush floating oil or loose oil out of tide pools and between crevices on rocky shores for collection by sorbent materials.

When To Use: When low pressure washing is not effective at removal of adhered oil, and when directed water jet can remove oil from hard to reach sites. To remove oil from man-made structures for aesthetic reasons.

Biological Constraints: May need to restrict use of washing to certain tidal elevations so that the oil/water effluent does not drain across sensitive low tide habitats.

Potentially Adverse Environmental Effects:

Intertidal - Removes many organisms on the surface. May drive oil deeper into the substrate if water jet is improperly applied. If containment methods are not sufficient, contamination may be flushed into lower intertidal zone.

Subtidal - Oiled sediment may be transported to shallow subtidal areas, contaminating them and/or burying benthic organisms.

#### 9. WARM WATER (AMBIENT TEMP TO 90° F, 50-100 PSI)

Objective: Mobilize thick and weathered oil adhered to rock surfaces prior to flushing it to the water's edge for collection.

Description: Heated seawater is applied at moderate to high pressure to mobilize weathered oil that has adhered to rocks. The warm water may be sufficient to flush the oil down the beach. If not, “deluge” flooding and additional low or high pressure washing can be used to float the oil to the edge for pickup. Oil is trapped by booms and picked up with skimmers or sorbents.

Applicable Shoreline Types: Rocky shores, gravel beaches, riprap, and seawalls, that are heavily oiled.

When To Use: When the oil has weathered to the point that low pressure washing with cold water is not effective at removal of adhered oil, which must be removed due to continued release of oil. To remove oil from man-made structures for aesthetic reasons.

Biological Constraints: Must restrict use to certain tidal elevations so that the oil/water effluent does not drain across sensitive low tide habitats (damage can result from exposure to oil, oiled sediments, and warm water). Should be restricted adjacent to stream mouths, tide pool communities, and similar rich intertidal communities.

Potentially Adverse Environmental Effects:

Intertidal - Can kill or remove most organisms. If containment methods are not sufficient, contamination may be flushed into lower intertidal zones that would otherwise not be oiled.

Subtidal - Oiled sediment may be transported to shallow subtidal areas, contaminating them and/or burying benthic organisms.

#### 10. HOT WATER/HIGH PRESSURE WASHING (>90° F, 50-100 PSI)

Objective: Dislodge trapped and weathered oil from otherwise inaccessible locations and surfaces not amenable to mechanical or other methods of removal.

Description: Water heaters mounted offshore on barges or small land-based units heat water up to 170° F, which is usually sprayed by hand with high pressure wands. Used without water flooding, this procedure requires immediate use of vacuum pumps to remove the oil/water runoff. With a deluge system, the oil is flushed to the water surface for collection with skimmers or sorbents.

Applicable Shoreline Types: Rocky shores, gravel beaches, riprap, and seawall that are heavily oiled.

When To Use: When the oil has weathered to the point that even warm water at high pressure is not effective at removal of adhered oil, which must be removed due to continued release of oil from the contaminated to uncontaminated areas. To remove oil from man-made structures for aesthetic reasons.

Biological Constraints: Restrict use to certain tidal elevations so that the oil/water effluent does not drain across sensitive low tide habitats (damage can result from exposure to oil, oiled sediments, and hot water). Should be restricted near stream mouths, tide pool communities, etc.. Released oil must be recovered to prevent further oiling of adjacent environments.

Potentially Adverse Environmental Effects:

Intertidal - All attached organisms in the direct spray zone will be removed or killed, and significant mortality of the lower intertidal communities will result even when used properly. Where the intertidal community is rich, the tradeoff between damage to the intertidal community from the hot water washing versus potential damage from leaving the oil must be carefully considered.

Subtidal - Oiled sediment may be transported to shallow subtidal areas, contaminating them and/or burying

benthic organisms.

## 11. SLURRY SAND BLASTING

Objective: Remove heavy residual oil from solid substrates.

Description: Use of sandblasting equipment to remove oil from substrate. May include recovery of used (oiled) sand in some cases.

Applicable Shoreline Types: Seawalls and riprap. Equipment can be operated from boat or land.

When To Use: When heavy oil residue is remaining on the shoreline, which needs to be cleaned for aesthetic or habitat restoration reasons, and even hot water wash is not effective.

Biological Constraints: Not to be used in areas of oyster/clam beds, or areas with high biological abundance on the shoreline directly below or adjacent to the structures.

Potentially Adverse Environmental Effects:

Intertidal - Complete destruction of all organisms in the intertidal zone of the target substrate.

Subtidal - Possible smothering and contamination of subtidal organisms with sand. When the used sand is not recovered, introduces oiled sediments into the subtidal habitat.

## 12. VACUUM

Objective: Remove free oil pooled on the substrate or from the water surface in sheltered areas.

Description: Use of a vacuum unit with a suction head to recover free oil. The equipment can range from small portable units which fill individual 55-gallon drums to large supersuckers that are truck-mounted and can lift large rocks. Can be used with water spray systems to flush the oil towards the suction head.

Applicable Shoreline Types: Can be used on any shoreline type if accessible. May be mounted offshore on barges, onshore on trucks, or as individual units on boats or ashore at low tide.

When To Use: When free, liquid oil is stranded on the shoreline (usually along the high-tide line) or trapped in vegetation which is readily accessible.

Biological Constraints: Special restrictions should be identified for areas where foot traffic and equipment operation should be limited, such as rich intertidal communities. Operations in wetlands are to be very closely monitored, with a site-specific list of restrictions.

Potentially Adverse Environmental Effects:

Intertidal - Minimal impacts if used properly and minimal substrate is removed. Subtidal - None.

## 13. CUTTING VEGETATION

Objective: Removal of oiled vegetation to prevent oiling of wildlife.

Description: Manual cutting of oiled vegetation using weed trimmers or other appropriate tool, and removal of cut vegetation with rakes. The cut vegetation is bagged immediately for disposal.

Applicable Shoreline Types: Marshes composed of emergent, herbaceous vegetation.

When To Use: Use when the risk of oiled vegetation contaminating wildlife is greater than the value of the vegetation that is to be cut, and there is no less destructive method to remove or reduce the risk to acceptable levels.

Biological Constraints: Strict monitoring of the operations must be conducted to minimize the degree of root destruction and mixing of oil deeper into the sediments. Access to bird nesting areas should be restricted during nesting seasons.

Potentially Adverse Environmental Effects:

Intertidal - Removal of the vegetation will result in loss of habitat for many animals. Cut areas will have reduced plant growth for two years. Along exposed section of shoreline, the vegetation may not regrow, resulting in erosion and permanent loss of the habitat. Trampled areas will recover much slower.

Subtidal - Long-term impacts would be increased sediment load in the subtidal area as a result of increased erosion in the intertidal area.

#### 14. CHEMICAL TREATMENT

As previously discussed, the Unified Command's use of alternative chemical countermeasures and treatments is discussed extensively in Annex G. The use of any oil spill cleanup agent (OSCA) is regulated by law in California (State Water Code Title 23, Chapter 10, Sections 2300-2336). OSCAs must be licensed by the State Water Resources Control Board and permission to use these materials must be obtained from the Unified Command on a case-by-case basis.

##### 14a. CHEMICAL OIL STABILIZATION

Objective: Solidify or gelatinize oil on the water surface or a beach to keep it from spreading or escaping.

Description: Chemical agent enhancing polymerization of the hydrocarbon molecules applied by semi-liquid spray or as a dry chemical onto the oil in the proper dosage. Depending on the nature and concentration of the polymerizing agent, the oil can be rendered viscoelastic, but still fluid, gelatinous, or semisolid. The primary purpose is to stabilize the oil keeping it from spreading or escaping, causing oiling elsewhere. May reduce the solubility of the light (and more toxic) fractions, by locking them into the polymer. This reduces both air and water exposure. Depending on the beach type and equipment used, recovery may be enhanced. Elastol is an example of an oil stabilizing agent.

Applicable Shoreline Types: Suitable on shorelines of low permeability where heavy oil has pooled on the surface, except vegetated shorelines.

When To Use: When heavy concentrations of liquid oil are on the substrate and adjacent water body, and physical removal can not be completed prior to the next tide so that the oil is likely to move to a more sensitive shoreline type. Should be used in conjunction with booming or other physical containment.

Biological Constraints: Not suitable for vegetated or riprap shore types. Should be avoided when birds or other wildlife that may be more adversely impacted by the congealed oil cannot be kept away from the treated shoreline. The congealed oil may stick to vegetation and wildlife, increasing physical damage to both. On riprap the congealed oil may remain in crevices where it may hamper recovery and prolong the release of sheens.

Potentially Adverse Environmental Effects:

May enhance the smothering effect of oil on intertidal organisms. Thus, the treatment should be considered only for heavily oiled beaches where smothering effects are already maximal. The congealed oil may stick to vegetation and wildlife increasing physical damage, such as impaired flight in birds or impaired thermoregulation in mammals and birds whose feathers or fur become oiled.

14b. CHEMICAL PROTECTION OF BEACHES

Objective: Pretreat shoreline to prevent oil from adhering to the substrate.

Description: Certain types of water-based chemicals, some of which are similar in composition to dispersants, are applied to beaches in advance of the oil.

Applicable Shoreline Types: Coarse- and fine-grained sand beaches, seawalls and piers (particularly piers or waterfront facilities that are of historical significance), eroding bluffs, wave-cut platforms, and riprap.

When To Use: When oil is projected to impact an applicable shoreline, particularly those which have high recreational or aesthetic value.

Biological Constraints: May not be suitable for nutrient-rich environments, particularly in confined waters. The toxicity of shoreline treatment products is reportedly much less than that of oil, but the toxicity of each product should be evaluated prior to consideration for use.

Potentially Adverse Environmental Effects:

The long-term environmental effects of these procedures are unknown. A toxic effect of the chemical can be anticipated. Additionally, the nutrient load to nearshore and interstitial waters may lead to eutrophication. Whether the predicted reduced residence time of the oil on the beach will increase the survival rate for sessile and interstitial organisms is unknown.

14c. CHEMICAL CLEANING OF BEACHES

Objective: To increase the efficiency of oil removal from contaminated areas.

Description: Special formulations which can be characterized as weak dispersants are applied to the substrate, as a presoak and/or flushing solution, to soften weathered or heavy oils to aid in the efficiency of flushing treatment methods. The intent is to be able to lower the temperature and pressure required to mobilize the oil from the substrate.

Applicable Shoreline Types: On the same shoreline types where deluge and water flushing procedures are applicable.

When To Use: When the oil has weathered to the point where it will not flow using warm to hot water. This approach may be most applicable where flushing decreases in effectiveness as the oil weathers.

Biological Constraints: Will require extensive biological testing for toxicity and water quality sampling prior to receiving approval for use. The concern is that the treated oil will be dispersed in the water column, and thus impact water column and subtidal organisms. Field tests will be required to show that use of a beach cleaner does not reduce overall recoverability of the oil and that its use is the best alternative for minimizing damage to flora and fauna. Use may be restricted where suspended sediment concentrations are

high, in areas adjacent to wetlands and tidal flats, and near sensitive subtidal resources.

Potentially Adverse Environmental Effects: If more oil is dispersed into the water column, there could be more oil absorbed onto suspended sediments and transferred to subtidal habitats, particularly along sheltered shorelines. Intertidal habitats might survive better, if cooler water temperatures are possible.

## 15. IN SITU BURNING

See Annex G for additional guidance on this potential shoreline cleanup method. Use of this methodology will usually require permission of the State Air Resources Board and the local air district when air basins of the State may be affected.

Objective: Removal of oil from the shoreline by burning.

Description: Oil on the shoreline is burned, usually when it is on a combustible substrate such as vegetation, logs, and other debris. Oil can be burned off of nonflammable substrates with the aid of a burn promoter.

Applicable Shoreline Types: On any shoreline type except tidal flats.

When To Use: Early in the spill event, after ensuring that the product is ignitable.

Biological Constraints: Should only be considered for use in the upper intertidal or supratidal zones since destruction of plants and animals from heat and burn promoters will be extensive. This technique is subject to restrictions and permit requirements established by Federal, State and local laws. It should not be used to burn PCBs, wastes containing more than 1,000 ppm of halogenated solvents, or other substances regulated by EPA.

Potentially Adverse Environmental Effects:

Little is known about the relative effects of burning oiled wetlands compared to other techniques or natural recovery. Burning may cause significant air pollution, which must be considered when weighing the potential benefits and risks of the technique. The combustion products may travel great distances before deposition.

## 16. NUTRIENT ENHANCEMENT

See Annex G for additional guidance on this potential shoreline cleanup method.

Objective: To speed the rates of natural microbial degradation of oil by addition of nutrients (specifically nitrogen and phosphorus). Microbial biodegradation is the conversion by microorganisms of dissolved and dispersed hydrocarbons into oxidized products via various enzymatic reactions. Some hydrocarbons are converted to carbon dioxide and cell material, while others are partially oxidized and/or left untouched as a residue.

Description: Nutrients are applied to the shoreline in one of several methods: soluble inorganic formulations which are dissolved in water and applied as a spray at low tide, requiring frequent applications; slow-release formulations which are applied as a solid to the intertidal zone and designed to slowly dissolve; and oleophilic formulations which adhere to the oil itself, thus they are sprayed directly on the oiled areas.

Applicable Shoreline Types: Could be used on any shoreline type where safe access is allowed.



**When To Use:** On moderately to heavily oiled shorelines, after other techniques have been used to remove as much oil as possible; on lightly oiled shorelines where other techniques are not effective; and where nutrients are a limiting factor in natural degradation.

**Biological Constraints:** Not applicable in shallow water, restricted embayments where nutrient overloading may lead to eutrophication, or where toxicity of nutrients, particularly ammonia, is of concern. There must be no risk of excessive oxygen depletion. Use is to be restricted adjacent to stream mouths, tide pools, etc. Contact toxicity of oleophilic formulations may restrict areas of direct application. Bioassay test results should be carefully evaluated, as other chemicals in the formulations could be toxic to aquatic organisms.

**Potentially Adverse Environmental Effects:**

Tests in Alaska showed that interstitial oxygen concentrations did not decrease to such an extent that it limited the supply of oxygen available to the bacteria. The fertilizer applications that increased nutrient concentrations and microbial activity did not harm the nearshore environment. About 99 percent of butoxyethanol, a toxic component of the Inipol formulation (the fertilizer commonly used in Alaska), degraded to nontoxic compounds within 24 hours after Inipol treatments of cobble shorelines. Researchers also found no evidence that the nutrients released from the treated shorelines stimulated algal blooms.

## 17. MICROBIAL ADDITION

See Annex G for additional guidance on this potential shoreline cleanup method.

**Objective:** To speed the rates of natural microbial degradation of oil by addition of nutrients and microbial products. Microbial biodegradation is the conversion by microorganisms of dissolved and dispersed hydrocarbons into oxidized products via various enzymatic reactions. Some hydrocarbons are converted to carbon dioxide and cell material, while others are partially oxidized and/or left untouched as a residue.

**Description:** Formulations containing hydrocarbon-degrading microbes and fertilizers are added to the oiled area. The argument is made that indigenous organisms will be killed by the oil, so new microbial species need to be added to speed the process of biodegradation.

**Applicable Shoreline Types:** Could be used on any shoreline type where safe access is allowed.

**When To Use:** On moderately to heavily oiled shorelines, after other techniques have been used to remove as much oil as possible; on lightly oiled shorelines where other techniques are not effective; and where nutrients are a limiting factor in natural degradation.

**Biological Constraints:** Not applicable in shallow water, restricted embayments where nutrient overloading may lead to eutrophication, or where toxicity of nutrients, particularly ammonia, is of concern. There must be no risk of excessive oxygen depletion. Use is to be restricted adjacent to stream mouths, tide pool communities, etc. Bioassay test results should be carefully evaluated, as other chemicals in the formulation could be toxic to aquatic organisms.

**Potentially Adverse Environmental Effects:**

Yet to be evaluated for full-scale field applications.

## 18. SEDIMENT REWORKING

**Objective:** Rework oiled sediments to break up the oil deposits, increase its surface area, and mix deep subsurface oil layers, which will expose the oil to natural removal processes and enhance the rate of oil

degradation.

Description: Beach sediments are rototilled or otherwise mechanically mixed, with the use of heavy equipment on gravel beaches. The oiled sediments in the upper beach area may also be relocated lower on the beach to enhance natural cleanup during reworking by wave activity (berm relocation).

Applicable Shoreline Types: Should be used only on beaches exposed to significant wave activity. Tilling-type activities work best on beaches with a significant sand fraction; large equipment can be used to relocate sediments up to boulder size.

When To Use: On moderately to heavily oiled shorelines, after other techniques have been used to remove as much oil as possible; on lightly oiled shorelines where other techniques are not effective.

Biological Constraints: Could not be used on beaches near shellfish-harvest or fish-spawning areas, or near bird nesting or concentrations areas because of the potential for constant release of oil and oiled sediments. Sediment reworking should be restricted to the upper part of the beach, to prevent disturbance of the biological communities in the lower intertidal area.

Potentially Adverse Environmental Effects:

Intertidal - Due to the mixing of oil into sediments, this process could further expose organisms which live below the original layer of oil. Repeated mixing over time could delay the reestablishment of organisms. Relocated sediments would bury and kill organisms. There may be a period of beach instability as the relocated sediments are redistributed.

Subtidal - There is a potential for release of contaminated sediments to the nearshore subtidal habitats.

## 19. SHORELINE EXCAVATION, CLEANSING AND REPLACEMENT

Objective: To remove and clean oiled sediments, then place them on the beach.

Description: Oiled sediments are excavated using heavy equipment on the beach at low tide. The sediments are loaded into a container for washing. Cleansing methods include hot water wash or physical agitation with a cleansing solution. After the cleansing process, the rinsed materials are returned to the original area. Cleaning equipment must be placed close to beaches in order to reduce transportation problems.

Applicable Shoreline Types: Sand to boulder-sized beaches, depending on the limitations of the cleanup equipment. The beaches must be exposed to wave activity, so that the replaced sediments can be reworked into a natural distribution.

When To Use: Applicable on beaches with large amounts of subsurface oil, where permanent removal of sediment is undesired and other cleanup techniques are likely to be ineffective.

Biological Constraints: Excavating equipment must not intrude upon sensitive habitats. Only the upper and supratidal areas should be considered. Generally restricted in spawning areas. There may be site-specific constraints limiting placement of temporary sediment storage piles. Replaced material must be free of oil and toxic substances. The washing must not change the grain size of the replaced material, either by removal of fines or excessive breakage of friable sediments.

Potentially Adverse Environmental Effects:

Intertidal - All resident organisms will be affected, though the need for removal of the oil may be determined

to be the best overall solution. Equipment can be heavy, large and noisy, disrupting wildlife. Transportation to site may entail aircraft, land vehicles, or barges, which contribute to environmental disruption. There may be a period of beach instability as the replaced sediments are redistributed. Subtidal - May release oil and fine-grained oily sediments into the water during excavation. This is a concern due to tidal flushing of beach sediments and exposed excavations.

## COASTAL INLETS

The coastal inlets of California are the focal points for designing strategies to protect the vital resources of the State's estuaries and bays. It is through these inlets that oil spilled on open ocean waters could reach inland resources. A project titled Coastal Inlet Protection Strategies for Oil-Spill Response was commissioned jointly by the Marine Spill Response Corporation (MSRC) and the Office of Oil Spill Prevention and Response (OSPR) of the California Department of Fish and Game. This document provides a synopsis of the relevant characteristics of the coastal inlets in the State, as well as a discussion of potential protection strategies for each inlet. The discussion of each inlet alludes to the range of conditions that might occur at the inlet; however, the proposed protection strategies are based on the best professional judgement of what would work under average wave and tide conditions.

The diagrams that accompany the proposed strategies are schematic representations of boom placement, collection areas, and sediment dikes. Many of these diagrams are included in Appendix V of this Annex as part of the site specific response strategies for selected environmentally sensitive areas. The proposed strategies should not be interpreted as the only workable protection scheme. Each spill will be time, place, and circumstance specific. Therefore, the strategy finally used to protect the inlet will have to be chosen at the time of the spill.

## RESERVED AREAS FOR RESEARCH AND COUNTERMEASURES EFFECTIVENESS

Oil spills serve both responders and scientists as opportunities to critically and quantitatively examine the environmental effects of, not only the spilled oil, but also the effects and effectiveness of innovative cleanup procedures or new cleanup products. A reference or control site is essential to most experiments.

The objective of most of these studies is to detect a difference or make a comparison between the different treatments. In order to measure the change, a reference or control is required; without this baseline, comparison of the results is impossible and the study is probably worthless.

One way to establish these much needed controls at spills of opportunity is by the use of "set-asides" (areas that are impacted by oil that are set aside and left untreated for experimental purposes). NOAA arranged for such set-asides immediately after the Prince William Sound spill. Having these sites made it possible to conduct the long term study of treatment effects in the Sound which is still continuing.

## CRITERIA FOR TERMINATING CLEANUP

When to terminate specific oil spill cleanup actions can be a difficult decision; When is clean, clean enough? The increasing cost of the cleanup and the damage to the environment caused by cleanup activities must be weighed against the ecological and economic effects of leaving the remaining oil in place. The decision to terminate cleanup operations is site-specific. Cleanup usually cannot be terminated while the following conditions exist:

- Recoverable quantities of oil remain on water or shores.
  - Contamination of shore by fresh oil continues.
  - Oil remaining on shore is mobile and may be refloated to contaminate adjacent areas and nearshore waters.
- Cleanup may normally be terminated when the following conditions exist:
- The environmental damage caused by the cleanup efforts is greater than the damage caused by leaving the remain oil or residue in place.
  - The cost of cleanup operations significantly outweighs the environmental or economic benefits of continued cleanup.
  - The members of the Unified Command concur that the cleanup should be terminated.

## GENERAL RESPONSE STRATEGIES FOR THE NORTH COAST AREA

The North Coast Area is comprised of over ninety environmentally sensitive sites. Appendix V of this annex contains Site Summary sheets which detail the significance of each sensitive site. Most of these sites also have individual response strategies that may be employed if the threat of oiling exists. In some cases, more than one strategy is included for a given site due to variations in a site's profile from one visit to another.

The response strategies should be taken into consideration when a particular site or group of sites is threatened by a discharge of oil. However, the strategies were developed for conditions existing on the date surveyed, which may or may not be present when an actual response is deemed necessary. As such, the conditions present when a threat of oiling exists (i.e. weather, current, tide, availability of response resources, type of product, biological resources present, type of sediment present, site accessibility, etc.) should dictate the type of response that is initiated. Furthermore, the strategies presented should be considered a "last line of defense" to prevent oil from entering a specific environmentally sensitive site. Certainly, every effort to contain and recover the discharged oil while it is on the water should be made prior to employing the exclusionary booming measures that many of the strategies call for.

Although each environmentally sensitive site has a unique set of characteristics, the vast majority of North Coast sites fall into a broad category. These categories include Offshore Rocks/Rocky Headlands/Pocket Coves, Tidal Inlets (creeks and rivers), and Beaches. Below are general strategies for these three site categories.

### OFFSHORE ROCKS/ROCKY HEADLANDS/POCKET COVES

Sites of this nature are generally accompanied by high wave energy, which drastically reduces the effectiveness of existing spill response technology. Furthermore, these sites are often very difficult and dangerous to access via land or water due to heavy surf, submerged rocks, sheer cliffs and lack of roads to the area. As such, response options are very limited, which underscores the importance of recovering the oil on-water if at all possible.

Although high wave energy in the vicinity of offshore rocks and rocky headlands hinders the deployment and clean-up capabilities of response equipment, it is effective at breaking up oil and providing a continuous washing of oiled surfaces. Therefore, it may be appropriate not to respond to these sites.

Response may be more feasible in the pocket coves that are prevalent among the rocky headlands of the North Coast, since they are often sheltered from the high wave energy.

## TIDAL INLETS (creeks and rivers)

The majority of North Coast tidal inlet sites currently have one or more response strategies. Because these tidal inlets undergo significant physical changes throughout the year (i.e. varying flow rates, location of mouth, gradient of inlet, sediments present, tidal cycles, etc.), the strategies provided may not be the best response to a particular incident. Therefore, the following general strategies have been provided to aid in developing an appropriate response for various types of conditions.

Many of the North Coast tidal inlets are small creeks that may easily be diked to prevent oil from entering on an incoming tide. This may be done manually or with heavy equipment (front-end loader or bulldozer) provided the site has both the proper type of sediment (fine to medium grained sand) and a sufficient amount to accomplish the task. Inlets with relatively steep gradients may not need to be diked, as long as the creek maintains flow to the sea (including on an incoming tide).

The rate of flow of the inlet must also be taken into consideration when diking. If the flow is too great to effectively dike the creek, throughflow culverts placed within the base of the dike may allow an adequate amount of water to pass to keep the dike intact. These throughflow culverts must be placed below the surface of the water to prevent oil from passing through the dike.

Many North Coast creeks and rivers naturally dike themselves during the summer months, creating a lagoon shoreward of the natural dike. Although this natural dike limits interaction with the sea, large waves or high tides often allow seawater to wash over the natural dike. To prevent oil from entering the lagoon via large waves or high tides, a berm could be developed to heighten the highest portion of the natural dike.

As with construction of sediment dikes, feasibility of the berm may depend on the type and amount of sediment available at the site. Furthermore, construction of such a system generally requires the use of large machinery (front-end loaders or bulldozers). As such, use of a berm system may be dependent on the ability of heavy machinery to access the particular site.

There are a number of tidal inlets in the North Coast that are either too wide, too deep, or flow too rapidly to consider diking (even with throughflow culverts). Effective use of boom and skimming systems must be used at these sites to prevent oiling. However, swift currents and entrainment of oil will often prevent exclusionary booming from being a practical solution. Instead, deflection boom should be placed to force the oil to a catchment site (fine to medium-grained sand beach is best) for recovery of the oil. Another option is placing the deflection boom along both sides of the inlet to deflect the oil to a skimmer located at the apex of the two lengths of boom. Again, this will be dependent on the resources available and the conditions present at the site at the given time.

## BEACHES

These sites are often accompanied by surf, which drastically reduces the effectiveness of existing response technology. As such, booming and skimming will generally not be feasible at these sites. Therefore, the use of a berm system should be considered.

Prior to developing a berms, most beaches will need to be pre-cleaned in order to prevent oiling (and the subsequent need to dispose) vast amounts of beach debris (i.e. driftwood and kelp). On cobble beaches,

though, pre-cleaning should be weighed against the effects of oil penetration. In some instances, kelp strewn along this type of beach could prevent oil from penetrating the surface, thereby reducing the severity of impact on the site.

The development of a berm generally requires the use of front-end loaders or bulldozers. As such, heavy equipment access to the site is key. In addition, the type and quantity of sediment available is very important. Fine to medium-grained sand is best for berm construction.

Oil collected along the base of the berm, may be recovered using sorbent materials.

# CALIFORNIA

## Shoreline Countermeasure Matrix

### Very Light Oil (Jet fuels, Gasoline)

- ◆ Highly volatile (should all evaporate within 1 - 2 days)
- ◆ High concentrations of toxic (soluble) compounds
- ◆ Result: Localized, severe impacts to water column and intertidal resources
- ◆ Duration of impact is a function of the resource recovery rate
- ◆ No dispersion necessary

#### SHORELINE TYPE CODES

- |  |  |
|--|--|
| 1 Exposed Wave-cut Cliffs, Seawalls and Piers<br>2 Exposed Wave-cut Platforms<br>3 Fine- to Medium-grained Sand Beaches<br>4 Coarse-grained Sand to Gravel Beaches<br>5 Mixed Sand and Gravel (or Shell) Beaches | 6 Gravel Beaches and Rip-rap Structures<br>7 Exposed Tidal Flats<br>8 Sheltered Rocky Shores and Sheltered Man-made Structures<br>9 Sheltered Tidal Flats<br>10 Salt Marshes |
|--|--|

#### SHORELINE TYPES

COUNTERMEASURE	1	2	3	4	5	6	7	8	9	10
1) No Action	R	R	R	R	R	R	A	A	R	R
2) Manual Debris Removal										
3) Passive Collection (sorbents)	A	A	A	A	A	A	R	R	P	P
4) Debris Removal With Heavy Equipment										
5) Trenching (recovery wells)										
6) Sediment Removal										
7) Cold Water Flooding (deluge)										
8) Cold Water Washing										A
a) Low Pressure (<50 psi)										
b) High Pressure (50 - 100 psi)										
9) Warm Water Washing (ambient to 90°F)				P	P	P				
10) Hot Water Pressure Washing (>90°F)										
11) Slurry Sand Blasting										
12) Vacuum										
13) Cutting Vegetation <sup>+</sup>										
14) Chemical Treatment <sup>#</sup>										
a) Oil Stabilization										
b) Protection of Beaches										
c) Cleaning of Beaches										
15) Burning <sup>#</sup>										
16) Nutrient Enhancement <sup>#</sup>										
17) Microbial Addition <sup>#</sup>										
18) Sediment Reworking <sup>#</sup>			A	P						
19) Shore Removal and Replacement <sup>#</sup>										

- + Cutting will depend upon time of year. Consider only if receding of birds possible.
- # Requires State approval for all cases. RRT approval also required for federalized spills.
- R - Recommended - May be preferred alternative. Method which best achieves the goal of minimizing destruction or injury to the environment.
- A - Applicable - Viable and possibly useful but may result in limited adverse effects to environment.
- P - Possible - Effectiveness and possible harm to environment would have to be carefully evaluated.



Do Not Use

# CALIFORNIA

## Shoreline Countermeasure Matrix

### Light Oils (Diesel, No. 2 Fuel Oils, Light Crudes)

- Moderately volatile; will leave residue (up to 1/3 of spilled amount)
- Moderate conservation of toxic (soluble) compounds
- Will "oil" intertidal resources with long-term contamination potential
- Has potential for subtidal impacts (dissolution, mixing, sorbtion onto the suspended sediments)
- No dispersion necessary
- Cleanup can be very effective

#### SHORELINE TYPE CODES

- 1 Exposed Wave-cut Cliffs, Seawalls and Piers
- 2 Exposed Wave-cut Platforms
- 3 Fine- to Medium-grained Sand Beaches
- 4 Coarse-grained Sand to Gravel Beaches
- 5 Mixed Sand and Gravel (or Shell) Beaches

- 6 Gravel Beaches and Rip-rap Structures
- 7 Exposed Tidal Flats
- 8 Sheltered Rocky Shores and Sheltered Man-made Structures
- 9 Sheltered Tidal Flats
- 10 Salt Marshes

#### SHORELINE TYPES

COUNTERMEASURE	1	2	3	4	5	6	7	8	9	10
1) No Action	P	P	A	A	P	A	R	P	A	A
2) Manual Debris Removal		A	A	A	P	A	P	A	P	P
3) Passive Collection (sorbents)	R	R	R	R	R	R	A	R	A	A
4) Debris Removal With Heavy Equipment			A	P	P	P				
5) Trenching (recovery wells)			P	P	P	P				
6) Sediment Removal			A	A	P					
7) Cold Water Flooding (deluge)	A		A	A	A	A	P	A		
8) Cold Water Washing										
a) Low Pressure (<50 psi)	A	A		P	A	A		A		
b) High Pressure (50 - 100 psi)						P				
9) Warm Water Washing (ambient to 90°F)	A	A		P	P	A		P		
10) Hot Water Pressure Washing (>90°F)	P					P				
11) Slurry Sand Blasting	P					P				
12) Vacuum	A	A	A	A	A	A	A	A	A	A
13) Cutting Vegetation*										
14) Chemical Treatment*										
a) Oil Stabilization										
b) Protection of Beaches										
c) Cleaning of Beaches										
15) Burning*										
16) Nutrient Enhancement*			P	P	P			P	P	P
17) Microbial Addition*			P	P	P			P	P	P
18) Sediment Reworking*			A	P	P					
19) Shore Removal and Replacement*/Berm Relocation			P	P	P					

+ Cutting will depend upon time of year. Consider only if reoiling of birds possible.

# Requires State approval for all cases. RRT approval also required for federalized spills.

R - Recommended - May be preferred alternative. Method which best achieves the goal of minimizing destruction or injury to the environment.

A - Applicable - Viable and possibly useful but may result in limited adverse effects to environment.

P - Possible - Effectiveness and possible harm to environment would have to be carefully evaluated.

Do Not Use



# CALIFORNIA

## Shoreline Countermeasure Matrix

### Medium Oils (Most Crude Oils)


- About 1/3 will evaporate within 24 hours
- Maximum water-soluble fraction is 10 - 100 ppm
- Oil contamination of Intertidal areas can be severe/long term
- Impact to waterfowl and fur-bearing mammals can be severe
- Chemical dispersion is an option within 1 - 2 days
- Cleanup most effective if conducted quickly

#### SHORELINE TYPE CODES

- |   |  |
|---|--|
| 1 Exposed Wave-cut Cliffs, Seawalls and Piers | 6 Gravel Beaches and Rip-rap Structures                    |
| 2 Exposed Wave-cut Platforms                  | 7 Exposed Tidal Flats                                      |
| 3 Fine- to Medium-grained Sand Beaches        | 8 Sheltered Rocky Shores and Sheltered Man-made Structures |
| 4 Coarse-grained Sand to Gravel Beaches       | 9 Sheltered Tidal Flats                                    |
| 5 Mixed Sand and Gravel (or Shell) Beaches    | 10 Salt Marshes  |

#### SHORELINE TYPES

COUNTERMEASURE	1	2	3	4	5	6	7	8	9	10
1) No Action	P	P					A		A	A
2) Manual Debris Removal	P	A	R	R	R	R	P	R	P	P
3) Passive Collection (sorbents)	R	R	R	R	R	R	R	R	R	R
4) Debris Removal With Heavy Equipment			A	A	A	P		A		A
5) Trenching (recovery wells)			P	P	P	P				
6) Sediment Removal			A	P	P	P				
7) Cold Water Flooding (deluge)	A	A	A	A	A	A	A	A	A	A
8) Cold Water Washing										
a) Low Pressure (<50 psi)	A	A		P	P	A		A		P
b) High Pressure (50 - 100 psi)	A			P	P	A				
9) Warm Water Washing (ambient to 90°F)	A	A		P	P	A		A		
10) Hot Water Pressure Washing (>90°F)	A					P				
11) Slurry Sand Blasting	A					P				
12) Vacuum	A	A	A	A	A	A	A	A	A	A
13) Cutting Vegetation*								P		P
14) Chemical Treatment*										
a) Oil Stabilization			P	P	P		P			
b) Protection of Beaches		P	P	P	P	P		P		
c) Cleaning of Beaches		P	P	P	P	P		P		
15) Burning*	A	A	A	A	A	P				P
16) Nutrient Enhancement*			A	A	A		P	A	A	P
17) Microbial Addition*			A	A	A		P	A	A	P
18) Sediment Reworking*			A	P	P	P				
19) Shore Removal and Replacement*			P	P	P					

- + Cutting will depend upon time of year. Consider only if rearing of birds possible.
- # Requires State approval for all cases. RRT approval also required for federalized spills.
- R - Recommended - May be preferred alternative. Method which best achieves the goal of minimizing destruction or injury to the environment.
- A - Applicable - Viable and possibly useful but may result in limited adverse effects to environment.
- P - Possible - Effectiveness and possible harm to environment would have to be carefully evaluated.
-  Do Not Use

# CALIFORNIA

## Shoreline Countermeasure Matrix

### Heavy Oils (Heavy Crude Oils, No. 6 fuel, Bunker Crude)

- Heavy oils with little or no evaporation or dissolution
- Water-soluble fraction likely to be <10 ppm
- Heavy contamination of intertidal areas likely
- Severe impacts to waterfowl and fur-bearing mammals (coating and ingestion)
- Long-term contamination of sediments possible
- Weathers very slowly
- Dispersion seldom effective
- Shoreline cleanup difficult under all conditions

#### SHORELINE TYPE CODES

- |   |  |
|---|--|
| 1 Exposed Wave-out Cliffs, Seawalls and Piers | 6 Gravel Beaches and Rip-rap Structures                    |
| 2 Exposed Wave-out Platforms                  | 7 Exposed Tidal Flats                                      |
| 3 Fine- to Medium-grained Sand Beaches        | 8 Sheltered Rocky Shores and Sheltered Man-made Structures |
| 4 Coarse-grained Sand to Gravel Beaches       | 9 Sheltered Tidal Flats                                    |
| 5 Mixed Sand and Gravel (or Shell) Beaches    | 10 Salt Marshes  |

#### SHORELINE TYPES

COUNTERMEASURE	1	2	3	4	5	6	7	8	9	10
1) No Action	A	A					A		A	A
2) Manual Debris Removal		A	R	R	R	R	P	R	R	R
3) Passive Collection (sorbents)	R	R	R	R	R	A		R	A	A
4) Debris Removal With Heavy Equipment			R	R	R	P		A		
5) Trenching (recovery wells)			P	P	P					
6) Sediment Removal			P	P	P	P				
7) Cold Water Flooding (deluge)		A	A	A	A		A	A	A	A
8) Cold Water Washing										
a) Low Pressure (<50 psi)	A	A	P	P	A	A		A		P
b) High Pressure (50 - 100 psi)	A			P	P	A				
9) Warm Water Washing (ambient to 90°F)	A	A	P	P	P	P		A		
10) Hot Water Pressure Washing (>90°F)	A					P				
11) Slurry Sand Blasting	A					P				
12) Vacuum	A	A	A	A	A	A	A	A	A	A
13) Cutting Vegetation <sup>+</sup>								P		P
14) Chemical Treatment <sup>+</sup>										
a) Oil Stabilization			A	P	P		P		P	
b) Protection of Beaches			P	P	P	P				
c) Cleaning of Beaches			P	P	P	P		P		
15) Burning <sup>+</sup>	P	P	A	A	A	P				P
16) Nutrient Enhancement <sup>+</sup>			A	A	A	P	P	A	A	A
17) Microbial Addition <sup>+</sup>			A	A	A	P	P	A	A	A
18) Sediment Reworking <sup>+</sup>			A	A	P	A				
19) Shore Removal and Replacement <sup>+</sup>			P	P	P	P				

- + Cutting will depend upon time of year. Consider only if receding of birds possible.
- † Requires State approval for all cases. RRT approval also required for federalized spills.
- ~ Recommended - May be preferred alternative. Method which best achieves the goal of minimizing destruction or injury to the environment.
- A - Applicable - Viable and possibly useful but may result in limited adverse effects to environment.
- P - Possible - Effectiveness and possible harm to environment would have to be carefully evaluated.
- Do Not Use

The following matrix lists the culverts or bridges that could provide a pathway for spilled oil to reach sensitive environments. The matrices follow a north to south order as do the individual culverts/bridges listed within them. Response strategies and a Mendocino county matrix have not been developed due to these constraints, and will be completed for the 1996 ACP. DRAFT  
DEL NORTE COUNTY AND CITY OF CRESCENT CITY

county	nearest ACP site	Approx. location.	ownership. phone #.	response recommendation
Del Norte	A-1-002 Mouth of Smith River	Tidal gate in Tillas Slough on Reservation Ranch property. USCG unable to verify on-site.	Reservation Ranch 457-3516	to be developed
Del Norte	A-1-009 Elk Creek and Crescent City Harbor	Highway 101 on Elk Creek Bridge in Crescent City. Concrete culvert with debris barrier. GPS coordinates 41°45'11N, 124°11'27W	Cal Trans Local: 464-1751 Reg 1 Pbx: 445-6600	to be developed
Del Norte	A-1-009 Elk Crk/CRC Harbor; A-1-011 Redwood Nat'l/St Pks	Anchor Way and highway 101 in Crescent City. Concrete culvert with creosote log debris barrier. GPS coordinates 41°44'48N, 124°10'33W	Cal Trans Local: 464-1751 Reg 1 Pbx: 445-6600	to be developed
Del Norte	A-1-009 Elk Crk/CRC Harbor; A-1-011 Redwood Nat'l/St Pks	Sadomine Road and highway 101. Metal debris barrier with flow to and across Crescent Beach. GPS coordinates 41°44'22N, 124°09'46W	Cal Trans Local: 464-1751 Reg 1 Pbx: 445-6600	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on 9th St. to end of st. Culvert spills onto beach here. Brother Jonathan Pt. to north and overlook to south.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on 9th St, left on Pebble Beach Drive, right on 6th St. to end (head toward ocean). Culvert empties onto a rock and gravel beach.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on 9th St, left on Pebble Beach Drive, right on 5th St to end (head toward ocean). Culvert empties onto rock and gravel beach.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on Front St, right on A St, left on 3rd St to end. Culvert is north of 3rd St and empties onto beach.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on Front St, right on A St. Continue for 1 block to corner of 2nd and A Sts. Culvert flows to beach.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on Front St, left on A St to end. Culvert is on west side and flows to groin between Battery Pt and jetty.	Crescent City 464-9506	to be developed
Del Norte	A-1-010 Battery Point	from Hwy 101; turn W on Front St, left on C St. Three culverts flow to or near water treatment facility.	Crescent City 464-9506	to be developed
Del Norte	A-1-009 Elk Creek and Crescent City Harbor	from Hwy 101; turn W on Front St, left on Play St (in front of Visitors Ctr). Culvert flows to Elk Creek behind the Center and pool.	Crescent City 464-9506	to be developed
Del Norte	A-1-009 Elk Creek and Crescent City Harbor	from Hwy 101; turn W on Front St, left on Play St, left on Howe St. Culvert flows along parking lot to Elk Creek.	Crescent City 464-9506	to be developed
Del Norte	A-1-009 Elk Creek and Crescent City Harbor	from Hwy 101; turn W on Front St, left on 101 Southbound (aka L St) Culvert flows into Elk Creek just before intersection of 101 Northbound and 101 Southbound.	Crescent City 464-9506	to be developed
Del Norte	A-1-009 Elk Creek and Crescent City Harbor	from Hwy 101; turn E onto N St. Culverts flow into Elk Creek from both the north and south edges of the street along E. side of bridge.	Crescent City 464-9506	to be developed

REDWOOD NATIONAL AND STATE PARKS

county	nearest ACP site	Appert. location.	ownership. phone #.	response recommendation
Humboldt	A-1-022 Redwood Creek	Three box gaged culvert between Redwood Creek and its south slough. Water circulation only occurs through this culvert.	Redwood Nat'l and State Parks 464-6101	to be developed
Humboldt	A-1-022 Redwood Creek A-1-023 Stone Lagoon	Cement box culvert and overflow outlet for Freshwater Lagoon north of Stone Lagoon on east side of Hwy 101. Culvert is on northwest end and is plugged with sand.	Redwood Nat'l and State Parks 464-6101	to be developed

CITY OF ARCATA

county	nearest ACP site	Appert. location.	ownership. phone #.	response recommendation
Humboldt	A-1-034 North Humboldt Bay	Tidegate on McDaniel's Slough near mouth southeast of corner of V St. and Old Samsen Blvd. Jones Creek flows into this slough.	Reclamation District	to be developed
Humboldt	A-1-034 North Humboldt Bay	Tidegate on Butcher's Slough at the bend in South P St. This is the north gate. Jolly Giant Creek flows into this slough.	Arcata 822-5951	to be developed
Humboldt	A-1-034 North Humboldt Bay	Tidegate on Butcher's Slough adjacent to South G St. This is the south gate. Jolly Giant Creek flows into this slough.	Arcata 822-5951	to be developed
Humboldt	A-1-034 North Humboldt Bay	Tidegate on Butcher's Slough at the Wastewater Treatment Facility south of and adjacent to railroad tracks.	Arcata 822-5951	to be developed
Humboldt	A-1-034 North Humboldt Bay	Wastewater Treatment Facility discharge pipes accessed through facility off of South G St. Flow can be stopped.	Arcata 822-5951	to be developed
Humboldt	A-1-034 North Humboldt Bay	Tidal exchange culvert on Klopp Lake. Accessed by foot trail from Wastewater Facility or parking lot at end of South I St.	Arcata 822-5951	to be developed
Humboldt	A-1-034 north Humboldt Bay	Gannon Slough south of confluence of Bieth and Campbell Creeks adjacent to end east of highway 101; south of South G St. on-ramp.	1 Private + 1 Cal Trans Cal Trans Bar: 445-6600	to be developed

county	nearest ACP site	Approx. location.	ownership. phone #.	response recommendation
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W on S St, left on Waterfront Dr. to boat launch beneath Samson bridge. Culvert flows onto mudflat north of dock.	Eureka 441-4206	to be developed
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W on L St to end of street. Culverts flow to bay from end of L St. and from point south of L St and Waterfront Dr.	Eureka 441-4206	to be developed
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W on J St to end of street. Culvert flows to bay.	Eureka 441-4206	to be developed
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W on C St to end of street. Culvert flows to bay.	Eureka 441-4206	to be developed
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W onto Commercial St to end. Culvert flows to bay.	Eureka 441-4206	to be developed
Humboldt	A-1-036 North Humboldt Bay	fm Hwy 101: turn W onto Washington St, right on Waterfront Dr. Culvert with tidegate on north edge of empty lot and across street.	Eureka 441-4206	to be developed
Humboldt	A-1-037 Palco Marsh	fm Hwy 101: turn W on Washington St to end. Left through gate. Tidegate with culvert is just north of Sierra Pacific dock.	Eureka 441-4206	to be developed
Humboldt	A-1-037 Palco Marsh	fm Hwy 101: turn W on Del Norte St to end. Culvert with tidegate is on northwest corner of marsh near railroad tracks.	Eureka 441-4206	to be developed
Humboldt	A-1-037 Palco Marsh	fm Hwy 101: turn W on Del Norte St to end. Culvert is on west side of marsh approximately half way to southwest corner of marsh.	Eureka 441-4206	to be developed
Humboldt	A-1-038 Elk River	fm Hwy 101: turn W onto Truesdale to end of street. Culvert flows to bay.	Eureka 441-4206	to be developed
Humboldt	A-1-038 Elk River	fm Hwy 101: turn W onto Hülfer Ave. Street curves to parallel with Elk River. Culvert is between Hülfer and Truesdale sts.	Eureka 441-4206	to be developed
Humboldt	A-1-038 Elk River	fm Hwy 101: take Elk River-Herrick Ave. off-ramp. Turn west on Herrick to tallow works. Culvert with tidegate is on north side of road at end of road.	Eureka 441-4206	to be developed

USFWS NAT'L WILDLIFE REFUGE (LOLETA, HUMBOLDT COUNTY)

county	nearest ACP site	Approx. location	ownership, phone #.	response recommendation
Humboldt	A-1-040 South Humboldt Bay	Structure #1: on levee in South Bay west of highway 101 and northwest of Tompkins Hill off-ramp. Concrete metal pipe (CMP) culvert with 18" gate. Poor condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #2: on levee in South Bay west of Hwy 101 and northwest of Tompkins Hill off-ramp. CMP culvert with 18" gate. Poor condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #3: on levee in South Bay west of Hwy 101 and northwest of Tompkins Hill off-ramp. CMP culvert with 18"-24" gate. Poor condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #4: on levee in South Bay west of Hwy 101 and southwest of Tompkins Hill off-ramp. CMP culvert with 18"-24" gate. Fair condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #5: on levee north of Refuge office and west of Hwy 101. Concrete culvert with three 48" drainage gates. Excellent condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #6: on levee and Salmon Creek Overflow near northern Observation tower. Concrete culvert with 3 large drainage gates. Excellent condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #7: on levee and Salmon Creek. Concrete culvert with 3 large wooden gates including a fish door. Good condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #8: on levee, Salmon Creek, and end of Hookton Slough. CMP with 36" drainage gate and interior flashboard risers. Excellent condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #9: on Hookton Slough levee east of southern Observation tower. Concrete culvert with one large wooden gate. Good condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #10: on Hookton Slough levee southwest of south Observation tower. 48" screw/flap gate with risers. Excellent condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined
Humboldt	A-1-040 South Humboldt Bay	Structure #11: on Hookton Slough levee across channel from south tip of Teal Island. 48" screw/flap gate with risers. Excellent condition.	USFWS Nat'l Wildlife Refuge 733-5406	to be determined

HUMBOLDT BAY HARBOR DISTRICT

county	nearest ACP site	Approx. location	ownership, phone #.	response recommendation
Humboldt	A-1-036 North Humboldt Bay	Park St. Mitigation Project off Freshwater Creek. Access off Myrtle Ave. Originally a flaggate, but currently not maintained as such.	Harbor District D: 443-0801 E: 443-0804	to be developed
Humboldt	A-1-040 South Humboldt Bay	Fields Landing: Originally 4 flaggates in this area, but currently not maintained as such.	Harbor District D: 443-0801 E: 443-0804	to be developed

CAL TRANS - PATHWAYS TO HUMBOLDT BAY

county	nearest ACP site	Approx. location	ownership reference #	response recommendation
Humboldt	A-1-036 North Humboldt Bay	Outlets drain along 255, but locations are not available. Culvert with tidegates are located on wildlife pond and marsh area at bases of overhead ramps to/from Woodley Island.	Cal Trans 445-6600	to be developed
Humboldt	A-1-036 North Humboldt Bay	Hwy 101 south of Eureka: MP 83.61* 8x6 box culvert with flaps in pasture; MP 83.08 - 81.48 are reinforced concrete pipe (RCP) culverts.	Cal Trans 445-6600	to be developed
Humboldt	A-1-036 North Humboldt Bay	Hwy 101 N of Eureka: MP 81.14 box culvert with flaps; MP 80.73 - 80.09 are RCP culverts.	Cal Trans 445-6600	to be developed
Humboldt	A-1-036 N Humboldt Bay; A-1-037 Pablo Marsh; A-1-038 Elk R	Hwy 101 fm south end of Elk River bridge to K-Mart: Coincidental with Eureka city outlets. See Eureka section. Inlets (drains) on 4th or 5th St.	Cal Trans 445-6600	to be developed
Humboldt	A-1-038 Elk River	Hwy 101 K-Mart to Spruce Point: MP 75.22 and 75.11 both are RCP.	Cal Trans 445-6600	to be developed
Humboldt	A-1-038 Elk River	Hwy 101 K-Mart to Spruce Point: MP 74.75, 74.41, 74.24 RCP with flaps to Elk River.	Cal Trans 445-6600	to be developed
Humboldt	A-1-038 Elk River	Hwy 101 K-Mart to Spruce Point: MP 73.99 box culvert, 73.98, 73.85, 73.83, 73.76 metal pipes, 73.60 RCP.	Cal Trans 445-6600	to be developed
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Spruce Point to King Salmon: 73.28 RCP. 73.25, 73.20 are 4' x 5' reinforced concrete box culverts.	Cal Trans 445-6600	to be developed
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Spruce Point to King Salmon: MP 73.10, 72.90, 72.73 are RCP culverts.	Cal Trans 445-6600	to be developed
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Fields Landing Overhead to King Salmon: the following are all RCP - 72.67, 72.62, 72.39, 72.25, 72.20, 72.16.	Cal Trans 445-6600	to be developed
"	"	72.05, 71.81, 71.80, 71.77, 71.72, 71.67, 71.64, 71.62, 71.51, 71.34, 71.22, 71.16, 71.15, 71.02, 71.00, 70.94, 70.86, 70.77, 70.75, 70.70.	"	"
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Fields Landing Overhead to Hookton Rd ramps: MP 70.51, 70.42, 70.34 are RCP culverts.	Cal Trans 445-6600	to be developed
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Fields Landing Overhead to Hookton Rd ramps: MP 70.31 (culvert), 70.30 (headwall) 70.24 (culvert) are pipe culverts with flaps.	Cal Trans 445-6600	to be developed
Humboldt	A-1-040 South Humboldt Bay	Hwy 101 Fields Landing Overhead to Hookton Rd ramps: 69.85, 69.66, 69.29, 69.20, 68.85, 68.77, 68.68, 68.62 all RCP.	Cal Trans 445-6600	to be developed

" = Cal Trans mile post markers are small, white signs posted along all State of California maintained freeways and highways.

## HUMBOLDT BAY GEOGRAPHIC RESPONSE PLAN

The following section contains the site summaries for areas within Humboldt Bay that are especially sensitive to the impacts of spilled oil, a geographic response plan (GRP) for the Bay, and tidal current data that may be useful in planning a response. Regardless of the spill location and the stage of the tide, responders should be prepared to respond to the locations identified in the GRP. Ultimately, oil will be carried to these locations by tidal currents and winds making them the best locations for containment and recovery.

Response to any spill on Humboldt Bay must take place in a coordinated, pre-planned attack so that oil is contained and recovered as close to the source of the spill as possible. This will be the best protection for both wildlife habitat and economic resources that are difficult or impossible to replace or expensive to clean. The geography of the Bay and the dynamics of tidal current and circulation and wind velocity and direction, may make protective booming of specific sensitive sites (eg. North Bay or South Bay) unachievable.

Humboldt Bay is separated from the ocean by long sand spits. It consists of three segments; North Bay (Arcata Bay) and South Bay, both characterized by extensive mud flats largely exposed at low tide and extensively interlaced with drainage channels; and Entrance Bay/North Bay Channel, a relatively narrow, deeper central area. North Bay and South Bay are the most sensitive areas to oiling and contain several smaller sites where oil could be carried after several tidal exchanges.

The following eleven pages of the Humboldt Bay Geographic Response Plan contain tidal current circulation information that may be useful in conducting an oil spill response on Humboldt Bay.

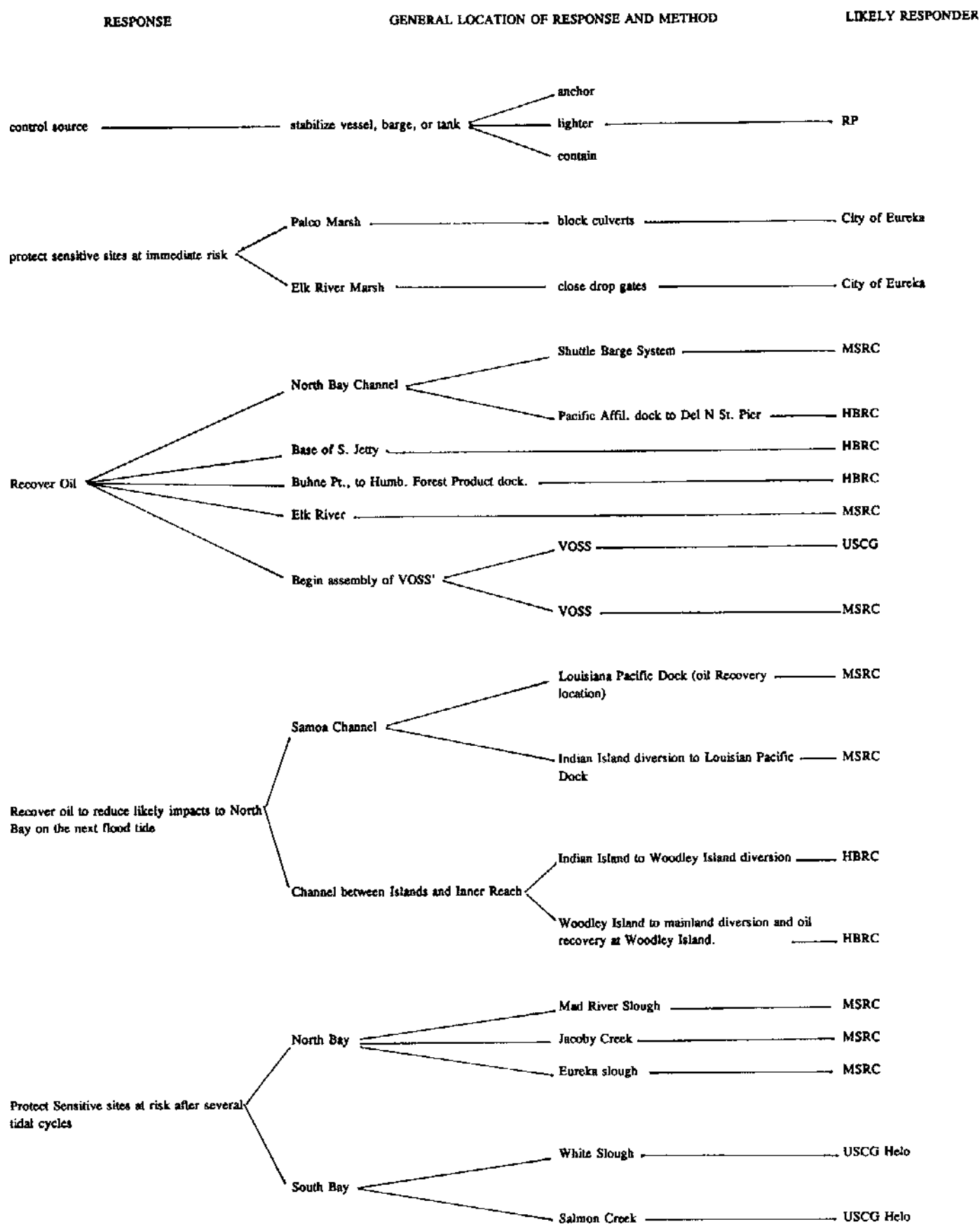
- 1) Base condition Maximum flood tide current
- 2) Base condition maximum ebb tide condition
- 3) Base water velocity vectors, flood
- 4) Base water velocity contour, flood
- 5) Base water velocity vectors, ebb
- 6) Base water velocity contours, ebb
- 7) Tidal simulation velocities
- 8) Path taken by oranges during study of flood tidal currents on May 22, 1996
- 9) Path taken by oranges during study of flood tidal currents on January 25, 1996



- 10) Freshwater discharge and mixing in Humboldt Bay as indicated by random sampling of salinity in parts per thousand
- 11) Waste water circulation as indicated by aqueous rhodamine dye.

# GEOGRAPHIC RESPONSE PLAN

Recommended Order of Spill Response and the Most Likely Responder



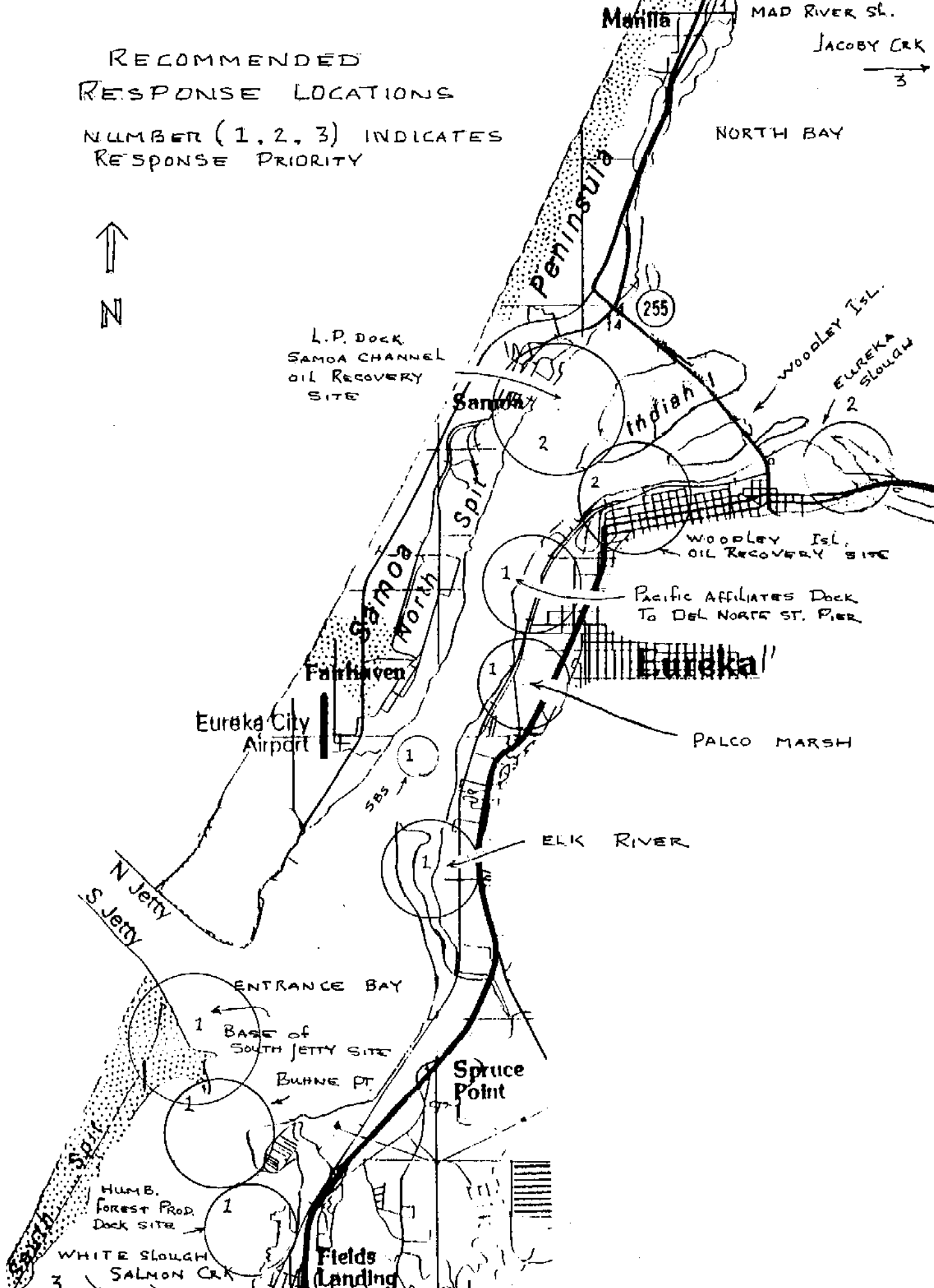
# Humboldt Bay Geographic Response Plan

Response priority, location, objective, probable equipment needs

Response priority	Response location	Objective	Likely equipment needed
1	Palco Marsh	block culverts and tide gates to prevent oil from entering marsh	stovels.....5 plastic (visqueen).....100 ft fence stakes.12 plywood.....2 workmen.....10 sorbent boom.....60 ft
1	Elk River Marsh	close drop gate to prevent oil entering marsh through culverts	2 workmen. key to lock securing manually controlled wheels.
1	on water (North Bay channel, Southport channel or wherever the greatest quantity of oil can be intercepted.	Use MSRC pre-staged shuttle barge system to recover oil	shuttle barges, prime mover and associated equipment. Crew.
1	Elk River	Recover oil. Prevent oil from moving up-river with the tide and/or wind.	harbor boom.....1,400 ft skimmer.....1 IT boom.....500 ft recovered oil storage sorbent boom.....300 ft workmen.....10 skiff.....1
1	vicinity Pacific Affiliates dock to Del Norte St. Pier	Recover oil by diverting to shore.	harbor boom.....1,200 ft recovered oil storage skiff.....1 workmen.....5 skimmer.....1
1	Base of S. Jetty	Recover oil by diverting to shore. On water recovery in this area may be possible during calm sea conditions.	harbor boom.....1,200 ft recovered oil storage skiff.....1 workmen.....5 skimmer.....1
1	S. Bay (Buhne Point to South Bay Boat Works	Recover oil by diverting to shore. On water recovery in Southport channel may be possible.	harbor boom.....1,200 ft recovered oil storage skiff.....1 workmen.....10 skimmer.....1
2	Southern tip of Indian Island on Samoa Channel side.	Deflect oil across channel to L. P. dock skimmer and away from Indian Island side	harbor boom.....1,200 ft workmen.....10 skiff.....2
2	Louisiana Pacific Lumber Dock	Recover oil by diverting to shore from Samoa Channel. Recover oil diverted by boom from the tip of Indian Island.	harbor boom.....1,200 ft recovered oil storage skimmer.....1 workmen.....10 skiff.....1
2	Southern tip of Indian Island to Woodley Island.	Deflect oil to skimmer at Southern tip of Woodley Island.	harbor boom.....1,200 ft recovered oil storage skimmer.....1 workmen.....10 skiff.....1
3	Mad River slough	Recover oil. Prevent oil intrusion into slough.	harbor boom.....1,200 ft recovered oil storage IT boom.....100 ft skimmer.....1 sorbent boom.....100 ft workmen.....6
3	Jacoby Creek	Prevent oil intrusion into creek.	harbor boom.....500 ft skimmer.....1 IT boom.....100 ft workmen.....6 sorbent boom.....100 ft
3	Eureka slough	Recover oil. Prevent intrusion into slough	harbor boom.....1,000 ft recovered oil storage IT boom.....200 ft skimmer.....1 sorbent boom.....100 ft workmen.....10
3	White Slough and Salmon Creek (South Humboldt Bay)	Prevent oil from being carried into creek or slough.	harbor boom.....400 ft

# RECOMMENDED RESPONSE LOCATIONS

NUMBER (1, 2, 3) INDICATES  
RESPONSE PRIORITY



Fairhaven  
Eureka City  
Airport

# RESPONSE STRATEGY RECOMMENDATIONS

- BASE of S. Jetty
- BUHNE Pt. / KING SALMON
- HUMBOLDT FOREST PRODUCTS DOCK

N Jetty  
S Jetty

BASE of S. JETTY  
(NOT TESTED)

BUHNE Pt.  
KING SALMON  
(NOT TESTED)

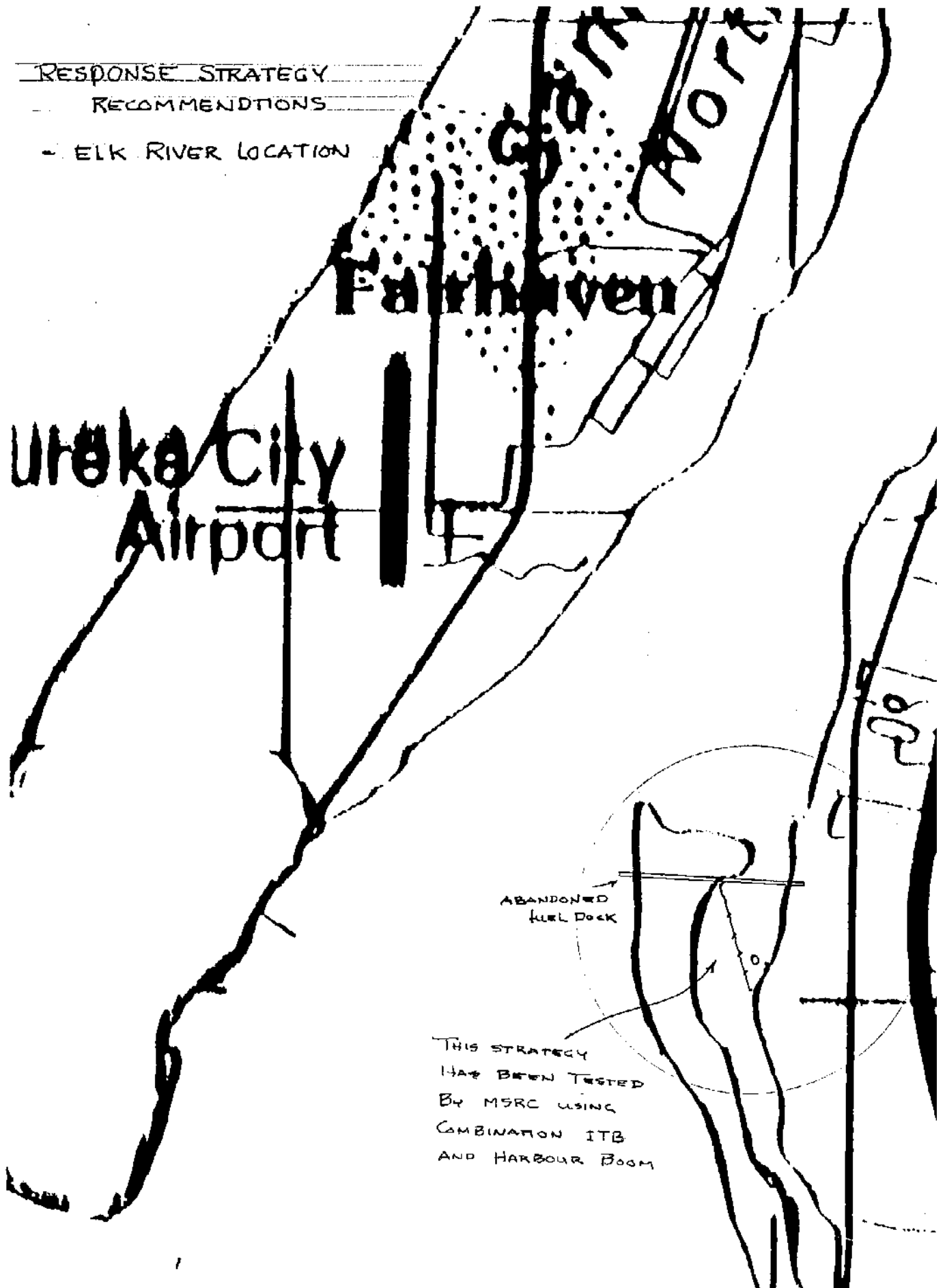
HUMBOLDT  
FOREST PRODUCTS  
DOCK  
(PORTIONS TESTED)

Fields  
Landing

RESPONSE STRATEGY

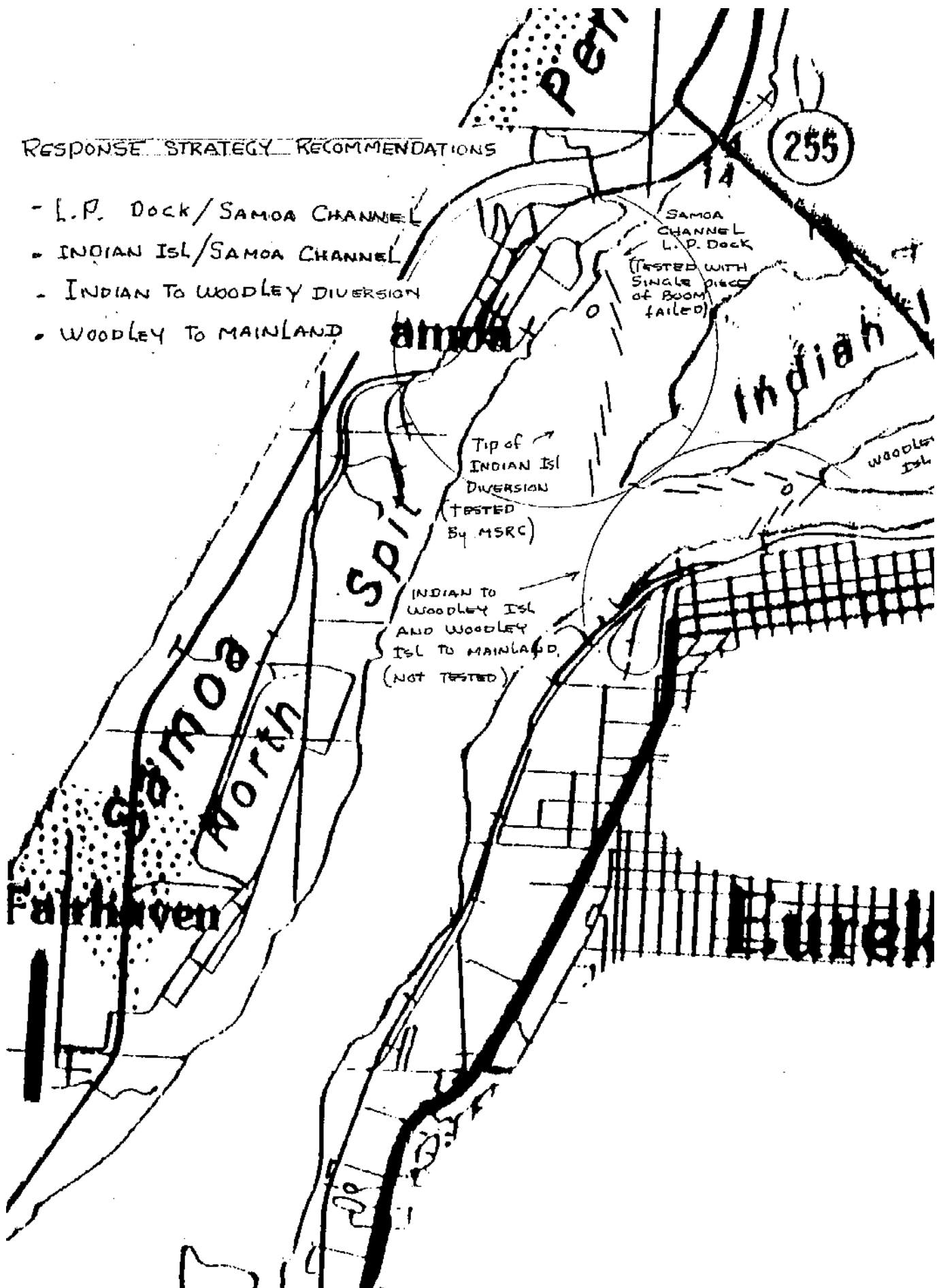
RECOMMENDATIONS

- ELK RIVER LOCATION



# RESPONSE STRATEGY RECOMMENDATIONS

- L.P. DOCK/SAMOA CHANNEL
- INDIAN ISL/SAMOA CHANNEL
- INDIAN TO WOODLEY DIVERSION
- WOODLEY TO MAINLAND



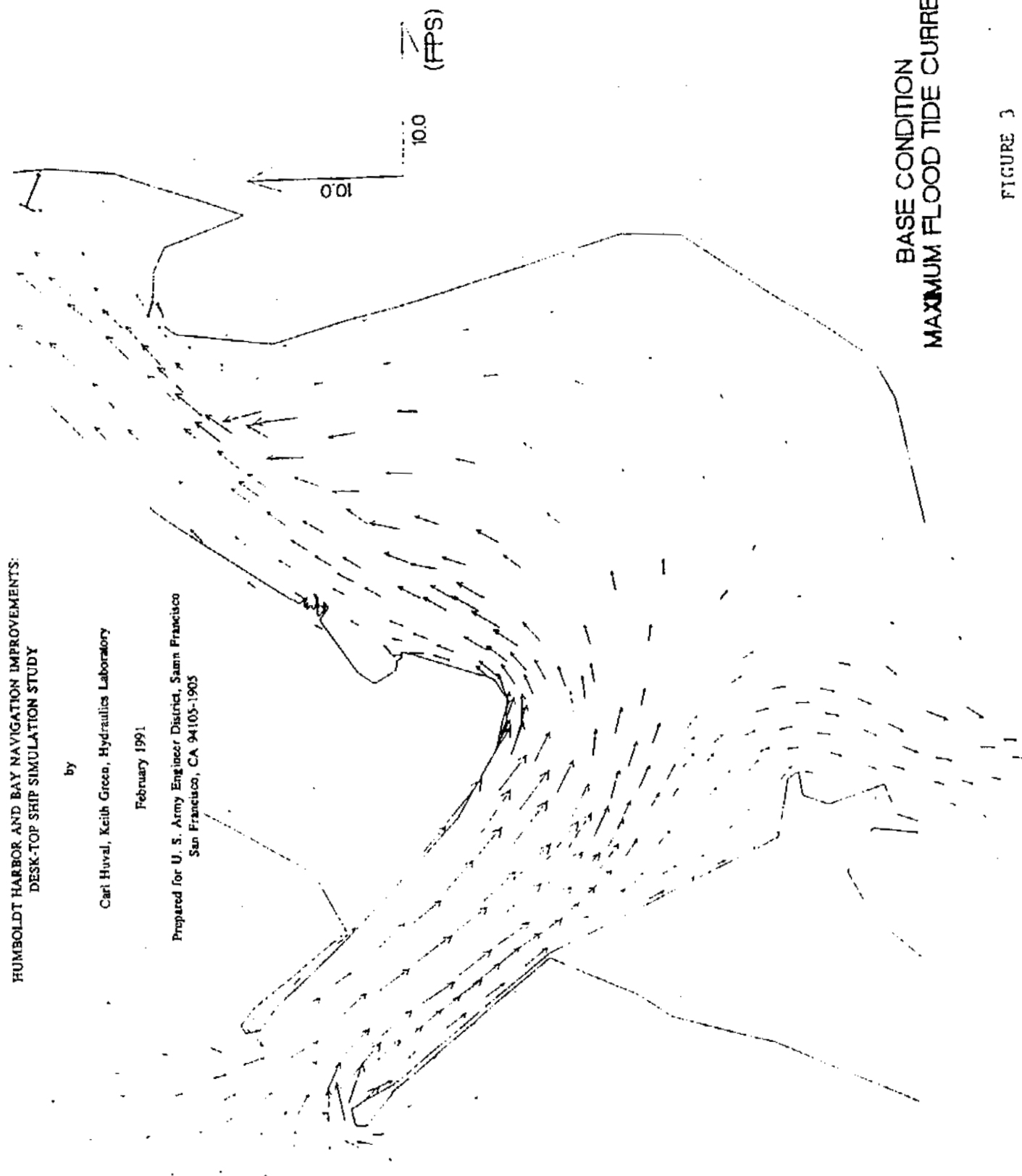
HUMBOLDT HARBOR AND BAY NAVIGATION IMPROVEMENTS:  
DESK-TOP SHIP SIMULATION STUDY

by

Carl Huval, Keith Green, Hydraulics Laboratory

February 1991

Prepared for U. S. Army Engineer District, Sann Francisco  
San Francisco, CA 94105-1905



BASE CONDITION  
MAXIMUM FLOOD TIDE CURRENT

FIGURE 3



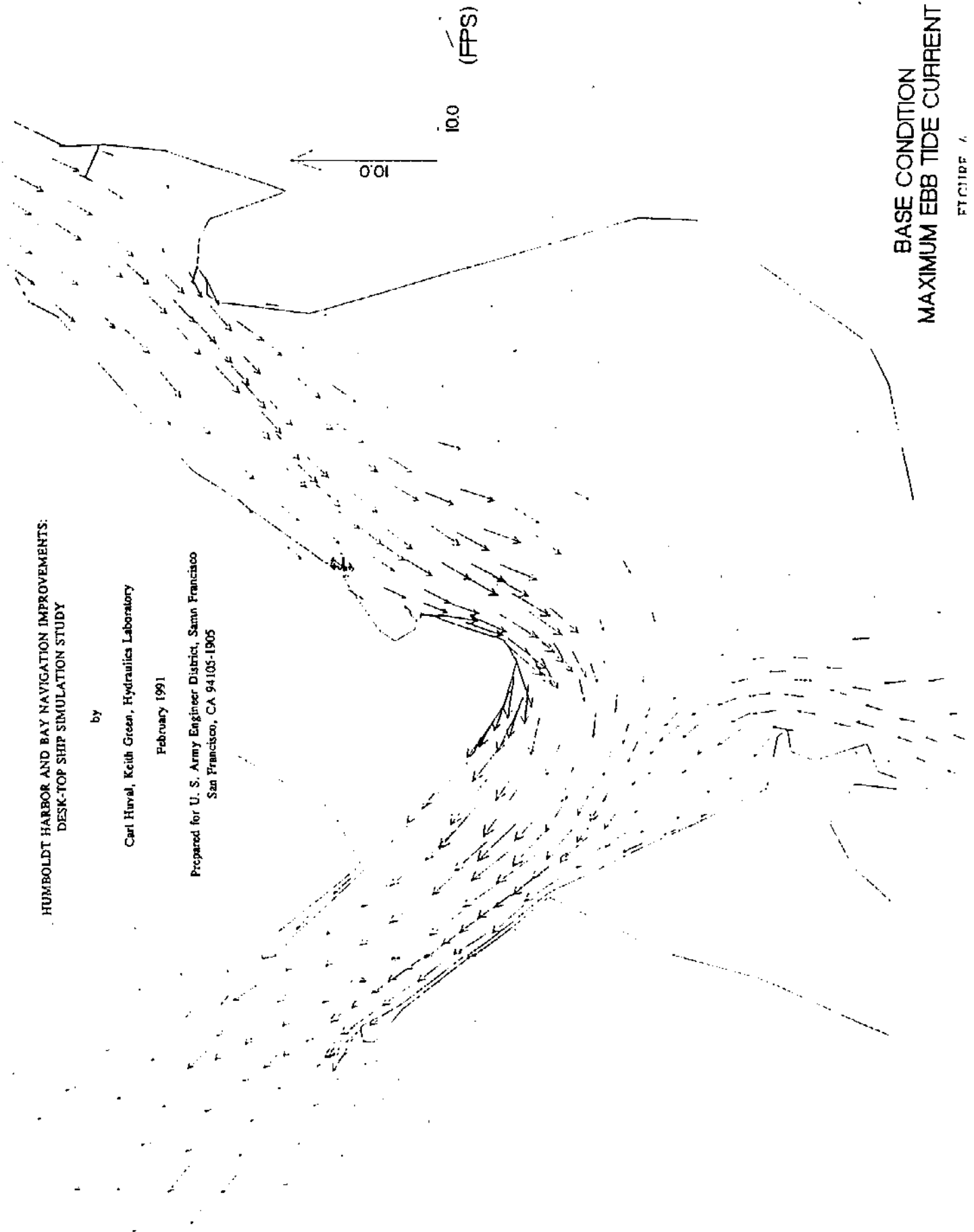
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BASE CONDITION  
MAXIMUM EBB TIDE CURRENT

ETC105F 4

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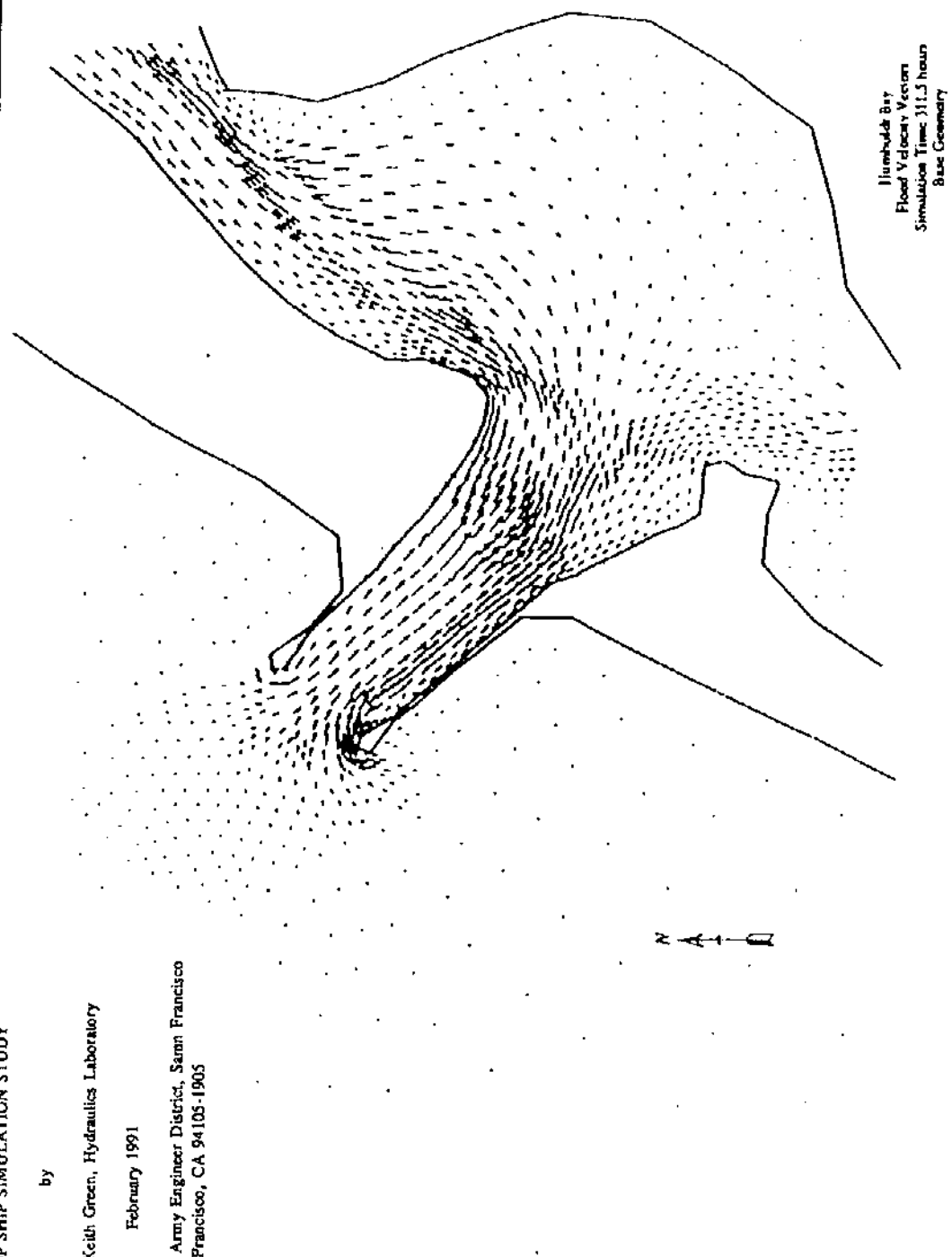


Figure 12. Base water velocity vectors, flood

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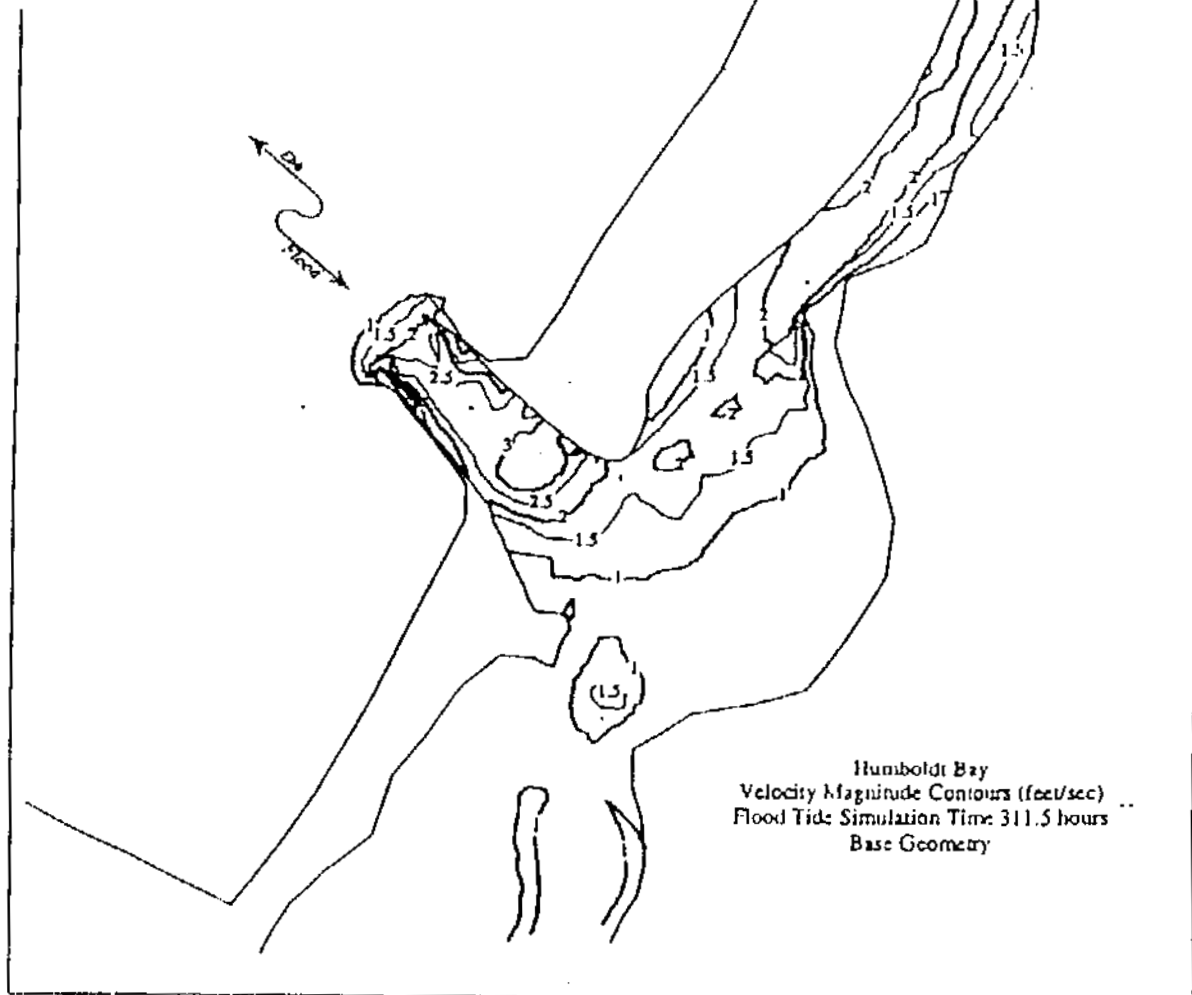


Figure 13. Base water velocity contours, flood

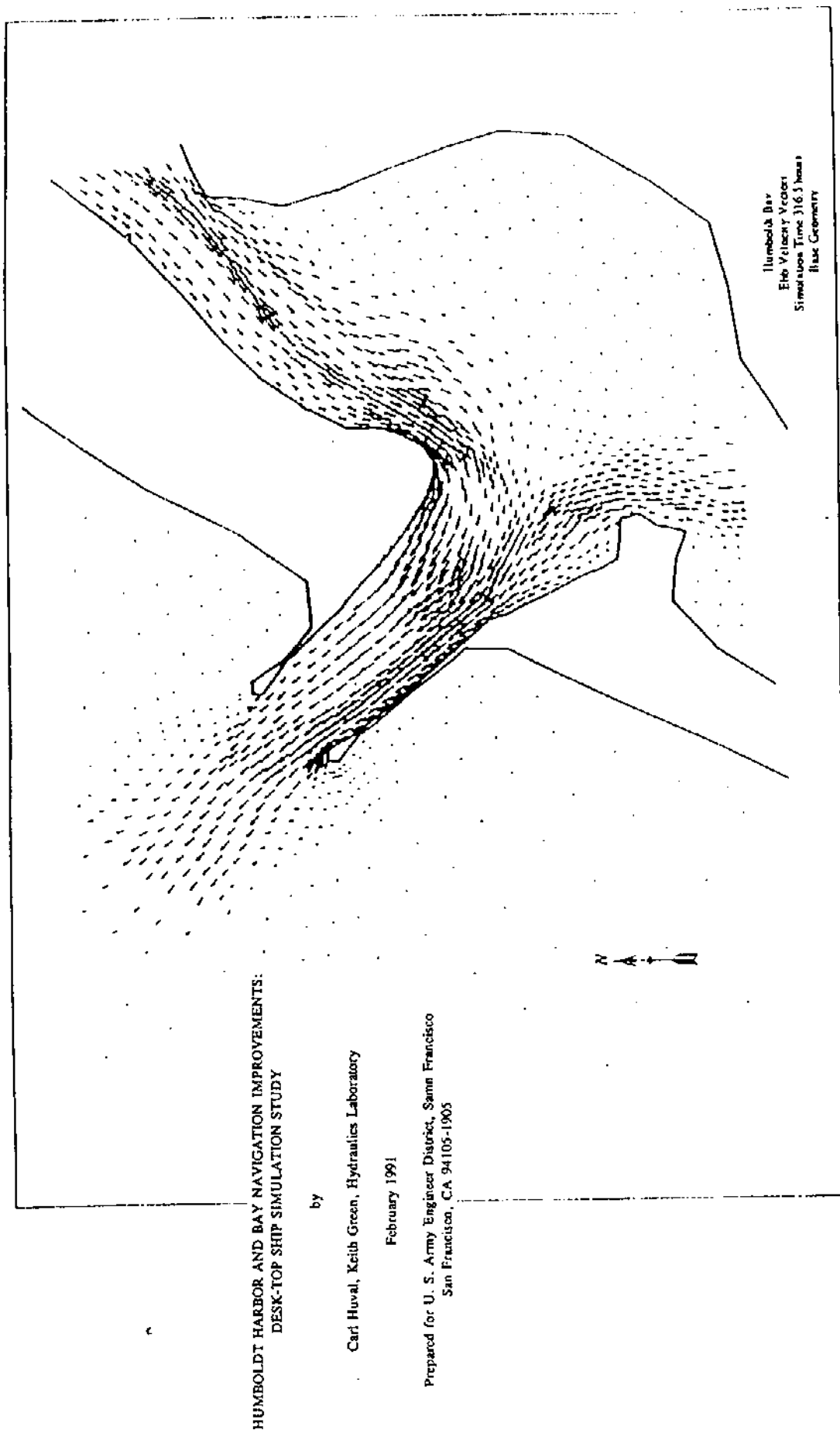


Figure 14. Base water velocity vectors, ebb

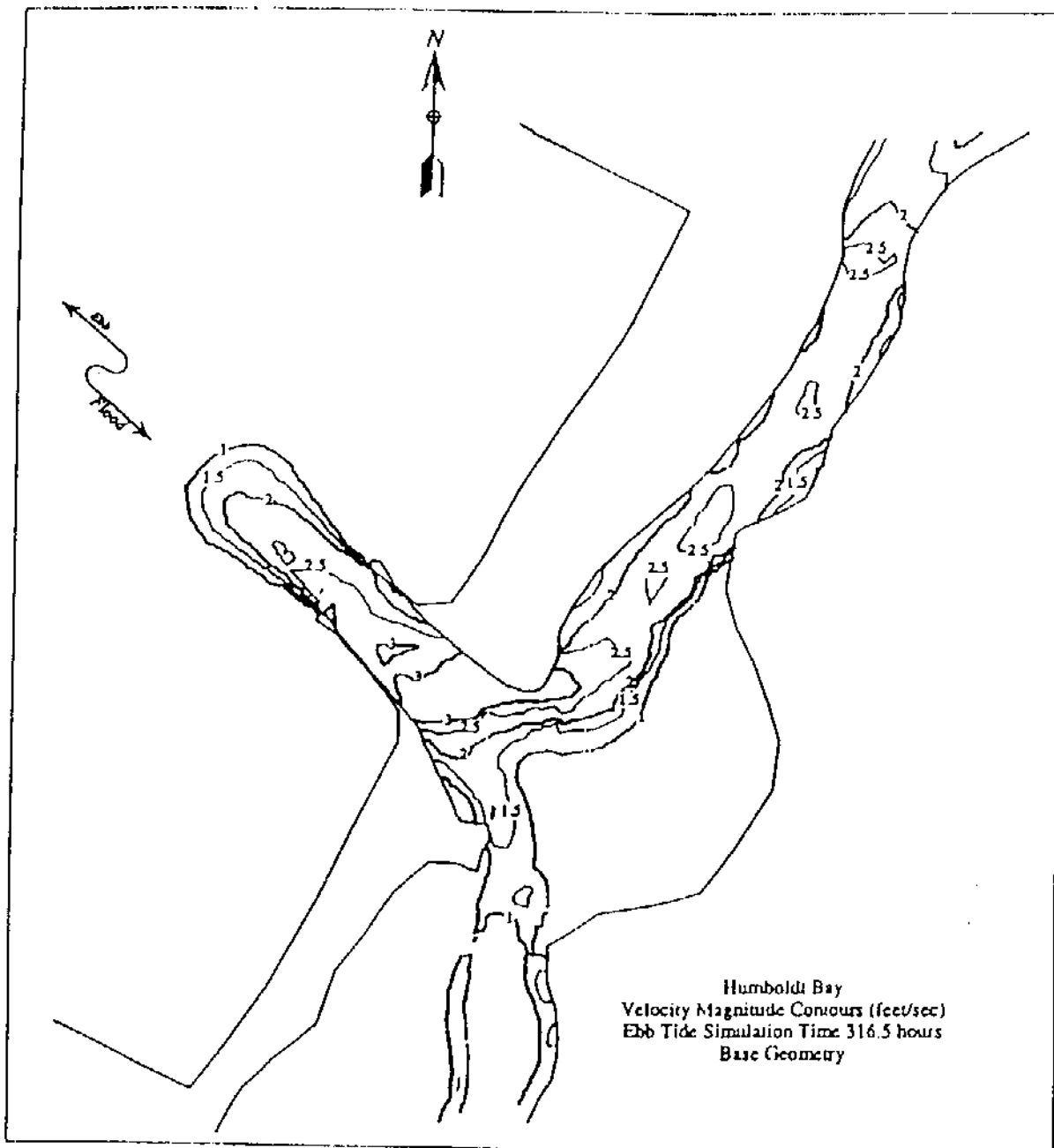


Figure 15. Base water velocity contours, ebb

HUMBOLDT HARBOR AND BAY NAVIGATION IMPROVEMENTS:  
DESK-TOP SHIP SIMULATION STUDY

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# TIDAL SIMULATION VELOCITIES

TIDE	ENTRANCE CONDITION	MAGNITUDE	
		BASE (EXISTING)	PLAN (PROPOSED)
TIDE TABLE •	FLOOD	270 FPS (11.6 KNOTS)	- - -
TIDE TABLE •	EBB	338 FPS (2.0 KNOTS)	- - -
CERC REPORT ••	FLOOD	24 FPS (1.4 KNOTS)	- - -
CERC REPORT ••	EBB	30 FPS (1.8 KNOTS)	- - -
MAXIMUM	FLOOD	47 FPS (2.8 KNOTS)	3.6 FPS (2.1 KNOTS)
MAXIMUM	EBB	61 FPS (3.6 KNOTS)	5.2 FPS (3.1 KNOTS)
LOW	FLOOD	35 FPS (2.1 KNOTS)	2.8 FPS (1.7 KNOTS)
LOW	EBB	50 FPS (3.0 KNOTS)	4.2 FPS (2.5 KNOTS)
50 % LOW	FLOOD	175 FPS (1.0 KNOTS)	- - -
50 % LOW	EBB	25 FPS (1.5 KNOTS)	- - -

• ENTRANCE TO INLET  
 •• CENTER OF INLET



PATH TAKEN BY  
ORANGES DURING  
STUDY OF CURRENTS  
ON MAY 22, 1996  
(FLOOD TIDE; WINDS  
NORTHERLY)

RELEASE  
LOCATION TO  
1005-1015 HOURS  
ORANGES WERE  
DISPERSED OVER  
CIRCLED AREA

T27  
T65  
T87  
T92  
T117  
T142  
\* T152  
T190  
T182  
HUMBOLDT  
FOREST  
EUREKA FISHERIES  
FIELDS LANDING LAUNCHING RAMP  
SOUTH BAY BOAT WORKS

#### ENVIRONMENTAL CONDITIONS

TIDES 0256 - +6.3  
1003 - +0.1  
1707 - +3.5  
2209 - +3.4

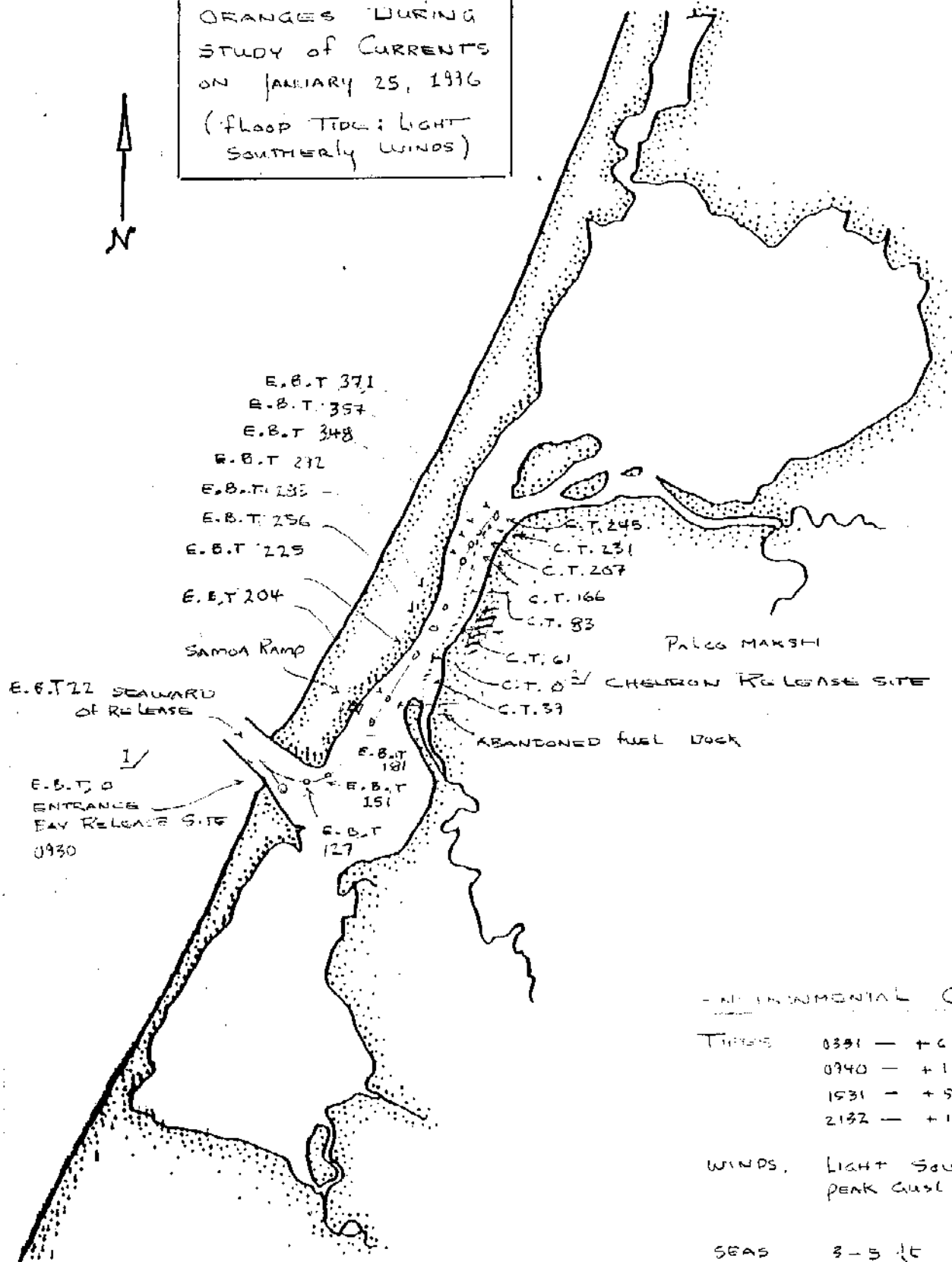
WINDS NORTHERLY 2-12 KTS

SEAS CALM 2-2 FEET

RAINFALL  
LIGHT RAIN PREVIOUS DAY

\* AFTER T117 ORANGES WERE  
BEING CARRIED UNDER DOCKS,  
AND INTO COVES. MOST  
WERE BECOMING TRAPPED  
OR STRANGLING.

PATHS TAKEN BY  
ORANGES DURING  
STUDY OF CURRENTS  
ON JANUARY 25, 1976  
(FLOOD TIDE: LIGHT  
SOUTHERLY WINDS)



ENVIRONMENTAL CONDITIONS

TIDES 0331 - +6.7 H.  
0940 - +1.7 L.  
1531 - +5.2 H.  
2132 - +1.1 L

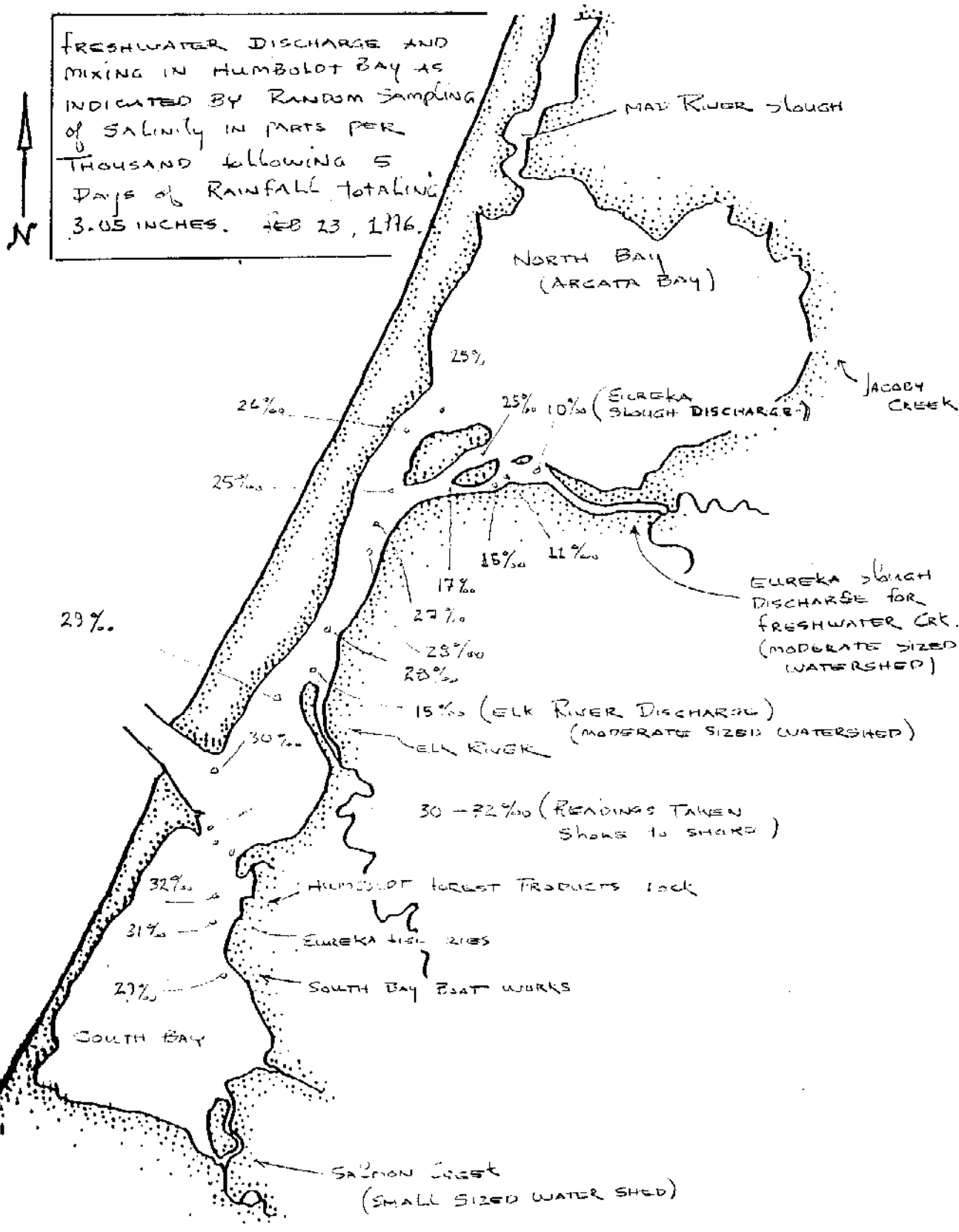
WINDS, LIGHT SOUTHERLY  
PEAK GUST 7 KTS

SEAS 3-5 ft

RAINFALL. HIGH. 4.36 INCHES  
DURING PREVIOUS  
5 DAYS.

- 1/ E.B.T IS  
ENTRANCE BAY TIME IN  
MINUTES AFTER RELEASE
- 2/ C.T. IS  
CHEVRON TIME IN  
MINUTES AFTER RELEASE

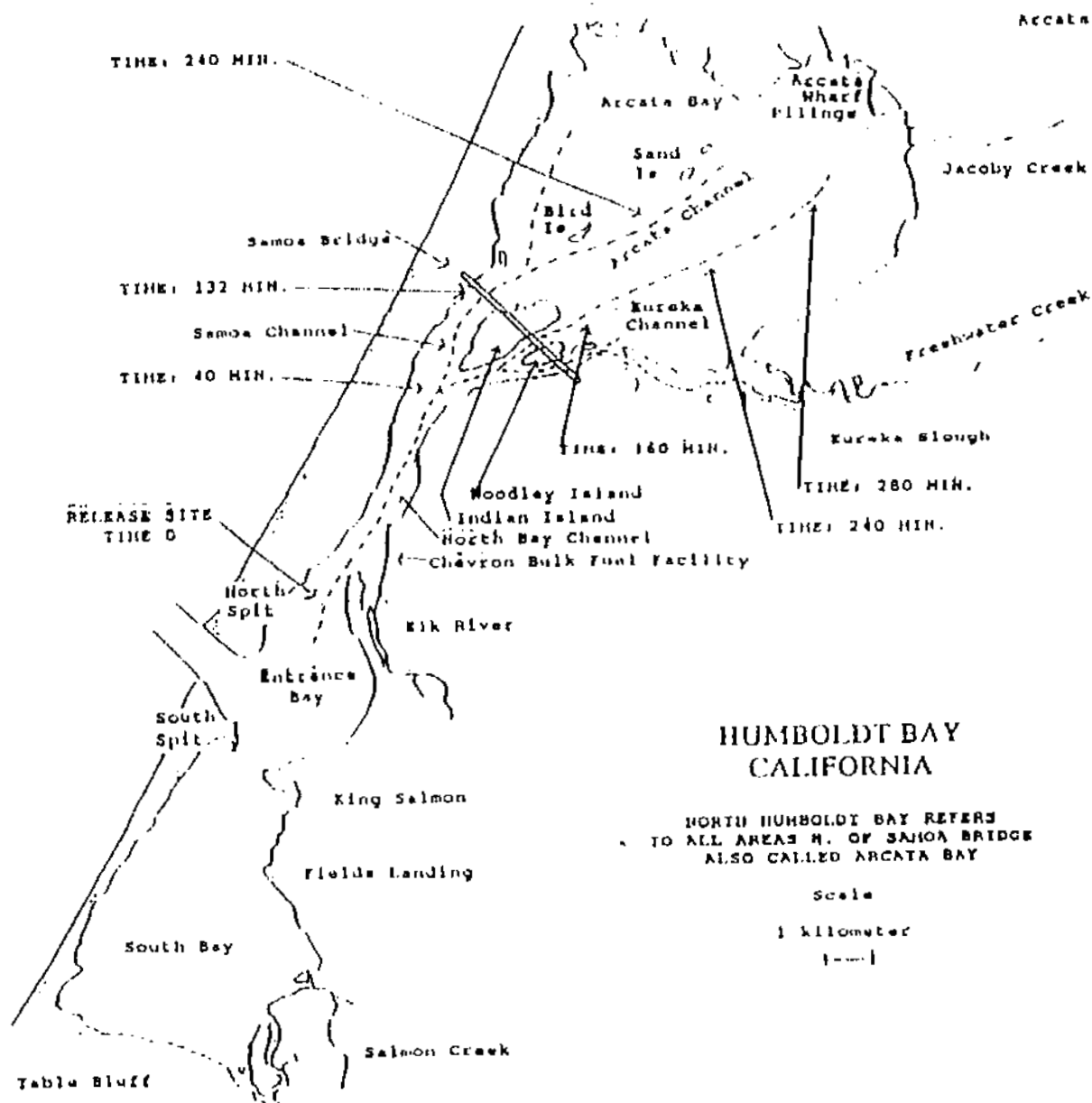




## Path of Aqueous Rhodamine Dye

The figure below shows the route and travel times for aqueous rhodamine dye released at the Murray Street sewage treatment plant outfall near Elk River split as part of a study conducted by the California Water Quality Control Board in 1979<sup>1</sup>.

The dye was released 1.5 hours following lower low water of -1.2 feet. The subsequent high water was +6.38 feet. The dye traveled from the plant outfall and up all three north bay channels into Arcata Bay within one tidal flood of 7.5 feet. The route of the dye and its short travel time emphasize the importance of immediate response and are an indication of the currents that responders will have to contend with in a spill response.



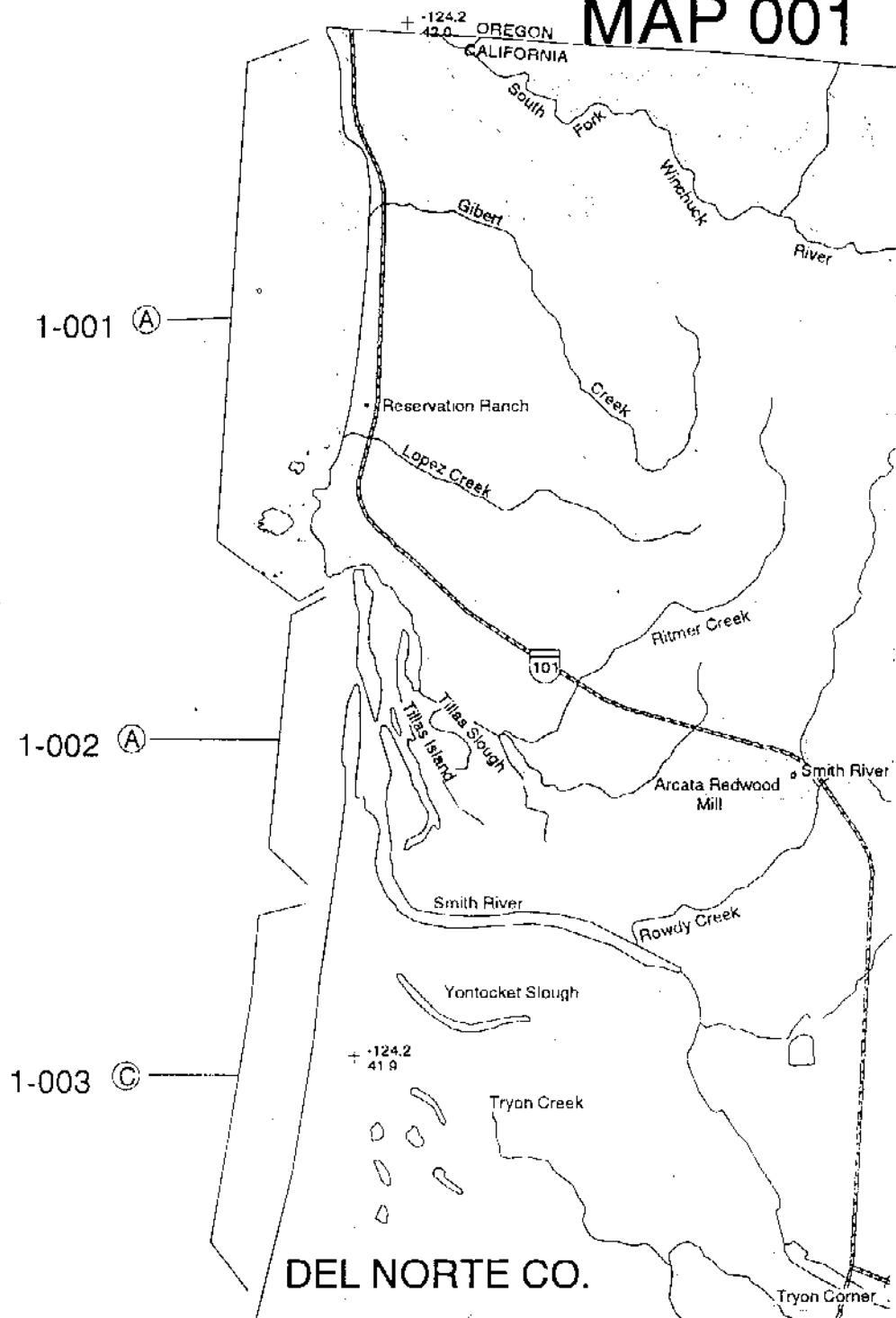
<sup>1</sup>Klarm, Robert R. Humboldt Bay Wastewater Circulation Studies, April of 1979. California Water Quality Control Board. Office Report No. 80-2.

# **Annex E: Environmentally Sensitive Sites**

## **Del Norte County**

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# MAP 001



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

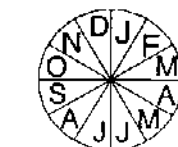
Last Update July, 1993



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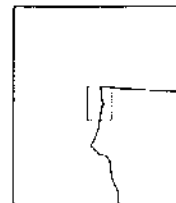
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ALBERS PROJECTION, NORTH AMERICAN DATUM OF 1927



SEASONALITY

## INDEX MAP



This map includes USGS quad sheets of Smith River

The comparable NOAA nautical chart is "Trinidad Head to Cape Blanco."

E-V-14 Change #1

E-65-NC

## SITE SUMMARY SHEET

**SITE:** A-1-001 Oregon Border/Pyramid Pt

**OSPR Map #:** 001

**County:** Del Norte

**USGS 7.5' Quad:** Smith River

**NOAA Chart:** 18602

**Lat:** 41 58' N

**Long:** 124 13' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. on U.S. Hwy 101 through Crescent City. U.S. hwy 101 parallels the shoreline and access is generally obvious. 'Mouth of the Smith River' Road MP 43.17 accesses Pyramid Point. North Indian Road, follows the coastline north of Pyramid Point, and is the closest access to Prince Island.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Predominantly fine to medium grained sand beaches. Area also includes wave-cut platforms, exposed rocky headlands and offshore rocks, especially in the vicinity of Pyramid Point.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries (03-09): Pelagic Cormorant, Western Gull, Pigeon Guillemot. Tufted Puffins(CSC). Prince Island: Snowy Egret and Black-crowned Night Heron nest sites. Rhinoceros Auklet and Double-crested Cormorant(CSC)(01-12);all(01-12). Aleutian Canada Goose(FT)(10-11;02-04) Marbled Murrelet(SE,FT)(01-12) on nearshore waters. Snowy Plover(FT)(01-12)in dunes. Brown Pelican(FE)(04-11) Raptors incl. Peregrine Falcon(FE) and Osprey(CSC)(01-12).

B. Fish: anadromous salmonids: Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:-Spawning runs(10-06) - Juveniles/Smolts(02-07)

C. Redtail Surfperch spawning (04-06);Dungeness Crabs in nearshore areas.

**ARCHAEOLOGICAL CONCERNS:** yes (see Ca. State Parks below)

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. State Park Dan Scott & Jeff Bomke	(707) 464-9533
Del Norte County Sheriff's Dept. (24 hr.)	(707) 464-4191
Tolowa Smith River Rancheria	(707) 487-7055
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045
Ca. DFG, Wildlife, Inland Fish, Marine Div	(707) 445-6493
Nat'l Marine Fisheries Service, Joe Cordaro	(310) 980-4017

## SITE SUMMARY SHEET

**SITE:** A-1-002 Mouth of Smith River

**OSPR Map #:** 001

**County:** Del Norte

**USGS 7.5' Quad:** Smith River

**NOAA Chart:** 18602

**Lat:** 41 57' N

**Long:** 124 12'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. on U.S. Hwy 101 through Crescent City to 'Mouth of Smith River' Road MP 43.17 (about 1/2 mile N. of Ship Ashore Resort). Turn left and go to end of road. Road ends at the mouth of Smith River. Best access for response is from Ship Ashore Resort on U.S. 101 Access also available at Salmon Harbor Resort and Westbrook Gravel operation.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet (all year). Medium to coarse grained sand on beach face. Back beach is pebble. Driftwood - moderate on south spit, low on north side. No natural oil/tar.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, coastal seabirds, wading birds, waterfowl incl. Common Loon, Western Grebe(CSC), Double-crested Cormorant(CSC)(01-12), Aleutian Canada Goose(FT)(10-11;02-04), Ca. Brown Pelican(FE)(04-11), Marbled Murrelet(SE,FT)(01-12), Raptors incl. Bald Eagle and Peregrine Falcon both(FE), and Osprey(CSC); all(01-12).

B. Fish: Anadromous salmonids: Coho (FPT) and Chinook (CSC) salmon, Steelhead (FSS) and Coastal Cutthroat (CSC) trouts:

- spawning runs(08-06)
- juveniles/smolts(02-08)
- Tidewater Goby (FE)(01-12)

C. Harbor Seals pup inside river mouth. River otter Kelp beds offshore.

**ARCHAEOLOGICAL CONCERNS:** yes (see Ca. State Parks below)

### **TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ship Ashore Resort

(707) 487-3141

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Ca. State Park, Dan Scott & Jeff Bomke

(707) 464-9533

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Ca. DFG, Wildlife and Inland Fish Divisions

(707) 445-6493

Nat'l Marine Fisheries Service, Joe Cordaro

(310) 980-4017



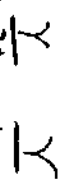
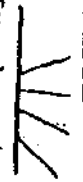


# SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

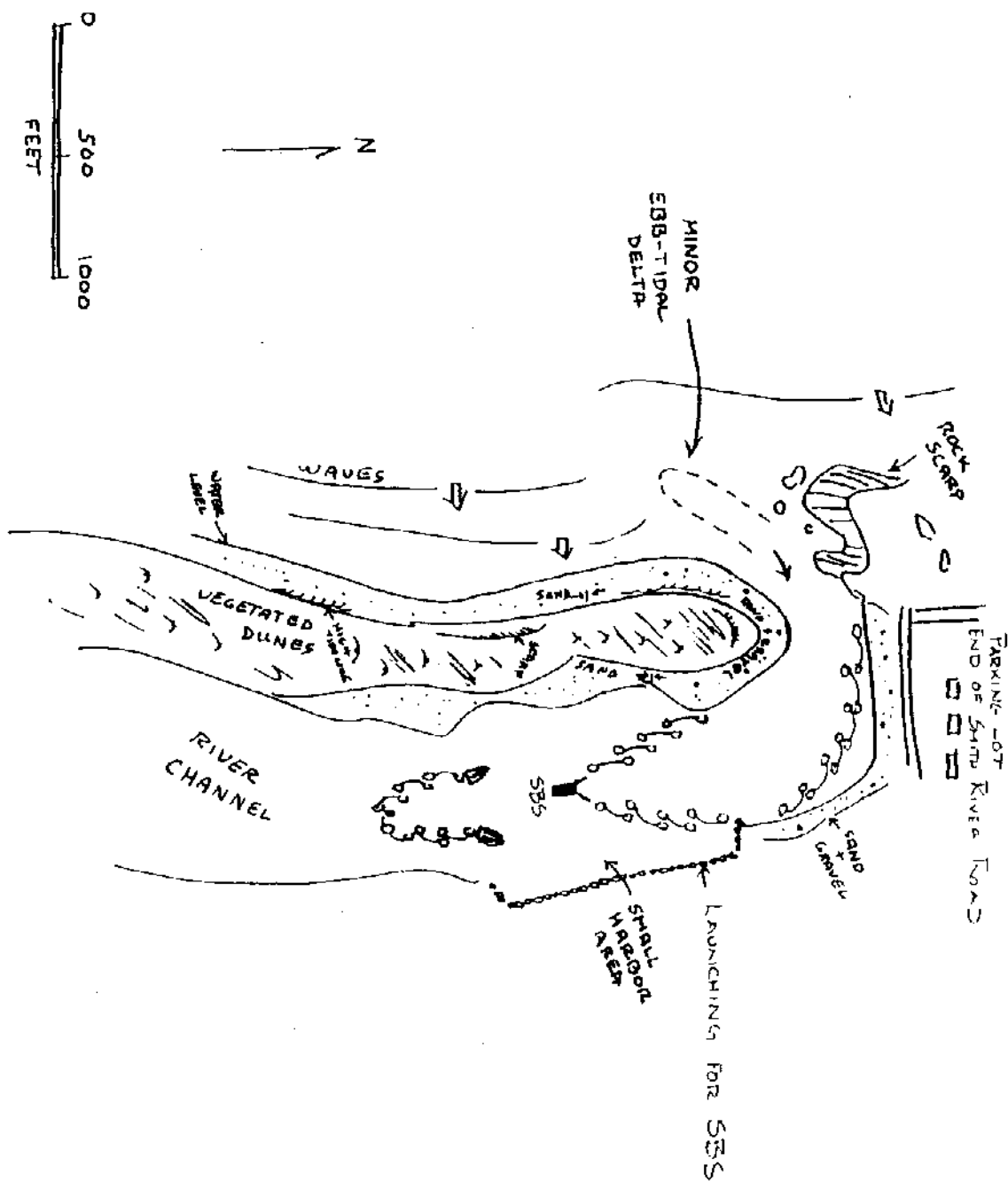
SITE NAME/NO MOUTH of Smith River / R-1-002

## CHECK-LIST

- North Arrow
- Scale
- High-Tide Line
- Low Tide Line
- substrate type

## LEGEND

-  boom skimmer
-  oil catchment area
-  salt-water marsh
-  fresh-water marsh
-  High-tide overwash zone
-  Last high-tide wash line



## SITE SUMMARY SHEET

**SITE:** A-1-003 South Spit Smith River

**OSPR Map #:** 001

**County:** Del Norte

**USGS 7.5' Quad. name:** Smith River

**NOAA Chart:** 18602

**Lat:** 41 54' N

**Long:** 124 12' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. on U.S. hwy 101 through Crescent City to Northcrest Drive MP 27.010. Turn left at signal light. Name changes to Lake Earl Drive after 2 miles. Go about 5 miles and turn left on Lower Lake Rd. Go about 5 miles and turn left on Kellogg Rd. Continue on Kellogg Rd. to its end at the beach. Smith River spit is accessible by 4WD by going N. on the beach.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Fine to medium grain sand beach.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Surfperch spawning 04-06

Surfsmelt spawning 04-07

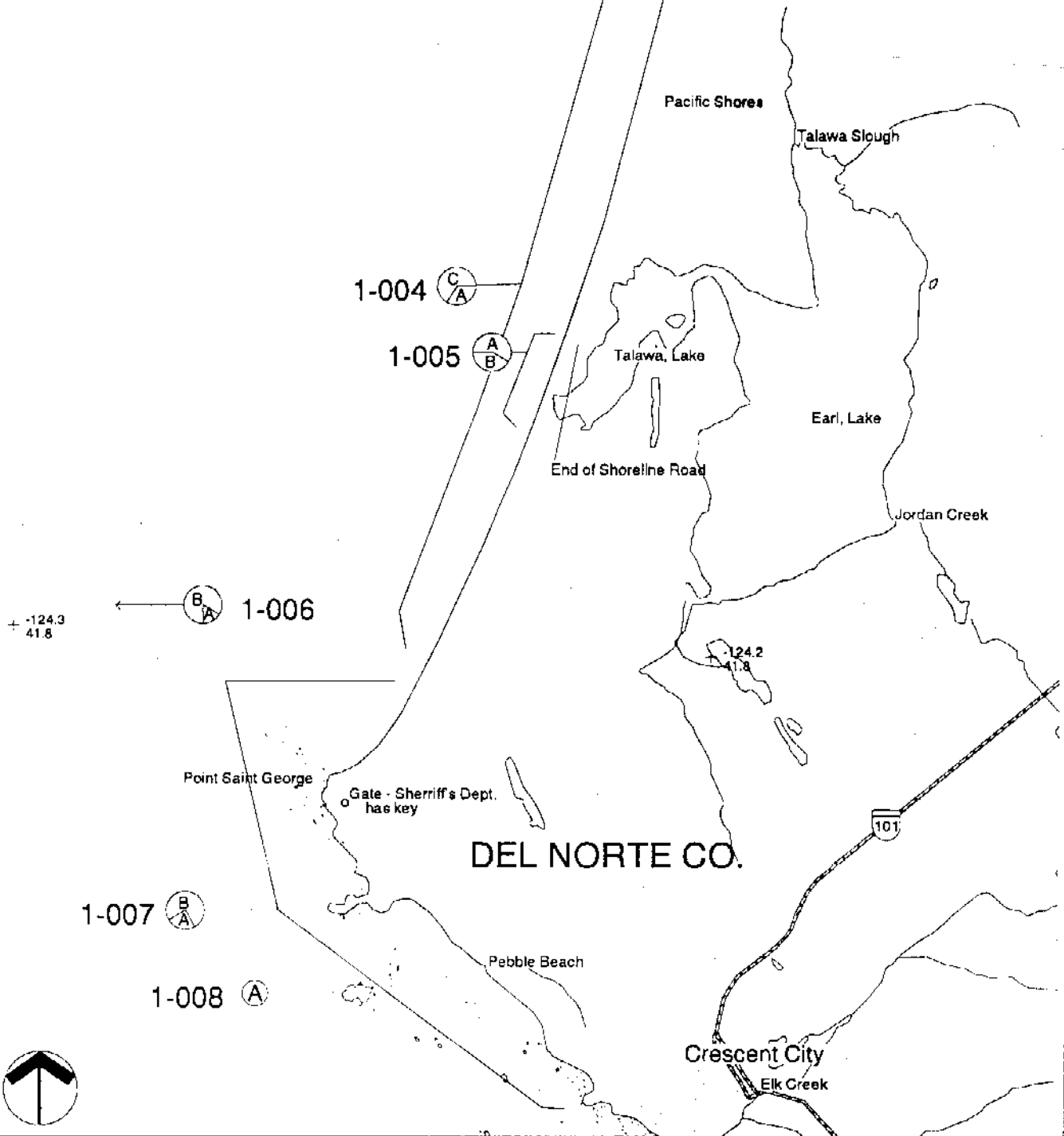
**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Marine Res. Division	(707) 445-6493
Ca. State Park, Dan Scott and Jeff Bomke	(707) 464-9533
Del Norte County Sheriff's Dept. (24 hr.)	(707) 464-4191
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045



# MAP 002



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY



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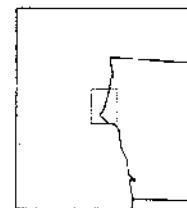
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ALBERS PROJECTION, NORTH AMERICAN DATUM OF 1927

E-V-21

Change #1

## INDEX MAP



This map includes USGS quad sheets of Crescent City

The comparable NOAA nautical chart is Trinidad Head to Cape Blanco

## SITE SUMMARY SHEET

**SITE:** A-1-004 Lake Tolowa Beach

**OSPR Map #:** 002

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat:** 41 48' N

**Long:** 124 14' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. on U.S. Hwy 101 through Crescent City to Northcrest Drive MP 27.010. Turn left at signal light. Name changes to Lake Earl Drive after 2 miles. Go about 5 miles and turn left on Lower Lake Road. Go about 3 miles and turn left onto Kellogg Road. Continue on Kellogg Road to its end at the beach. Access also available from Point St. George(A-1-007) along beach(4WD). Contact Sheriff's Dept. for access through locked gate.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Fine to medium grain sand beach.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Snowy Plover(FT)(01-12) esp. critical 04-08 nesting directly on beach within the dunes.

**ARCHAEOLOGICAL CONCERNS:** Yes

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG Wildlife Area, Cal Hampy	(707) 464-2523
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045
Redwood Nat'l & St Pks Dan Scott & Jeff Bomke	(707) 464-9533
Del Norte County Sheriff's Office (24 hr.)	(707) 464-4191
U.S. Army Corp of Engineers, Eureka	(707) 443-0855

## SITE SUMMARY SHEET

**SITE:** A-1-005 Lake Tolowa Inlet

**OSPR Map #:** 002

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat:** 41 49'30" N

**Long:** 124 13' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. U.S. on Hwy 101 through Crescent City to Northcrest Drive MP 27.010. Turn left at signal light. Name changes to Lake Earl Drive after 2 mi. Go about 5 mi. and turn left on Lower Lake Road. Go about 3 mi. and turn left onto Kellogg Road. Continue on Kellogg Road to Pacific Shores subdivision (south turning road near end of Kellogg Road. Turn left and continue to third right turn. Go right until road paralleling beach dunes is reached. Turn left and continue until road ends near inlet. Contact John Wilson (707) 464-7229 for information on Pacific Shores subdivision.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Tidal inlet (seasonal)
- Medium to fine-grained sand
- Wetland habitat within lake

This inlet is periodically breached during late winter or early spring by Del Norte County or Ca. DFG for flood control and/or wildlife management purposes.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Wintering ground for Pacific flyway waterfowl and non-waterfowl species. Resident waterfowl, shorebirds, wading birds (01-12), Ca. Brown Pelican(FE)(04-11), Snowy Plover (FT)(01-12), Resident raptors incl. Bald Eagle and Peregrine Falcon both(FE), and Osprey(CSC); all(01-12).

B. Fish: anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:

- spawning runs(08-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:** Yes. See Ca. State Parks below.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. State Park, Dan Scott & Jeff Bomke	(707) 464-9533
Ca. DFG, Wildlife and Inland Fish Div.	(707) 445-6493
Del Norte County Sheriff (24 hr.)	(707) 464-4191
Ca. DFG - OSPR Dispatch (24 hr.)	(707) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-006 Southwest Seal Rock

**OSPR Map #:** 002

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat/** 41 49'

**Long:** 124 21' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access. Rock is about 2 miles offshore and lies along Pt. St. George Reef.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Offshore rock.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Marine mammals: Steller Sea Lion (FT) - pupping season (05-07). Particularly sensitive during this period. Haul-out for juveniles and adults (01-12).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Nat'l Marine Fisheries Service, Joe Cordaro

(310) 980-4017

Ca. DFG, Wildlife and Marine Res. Div.

(707) 445-6493

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-007 Point St. George

**OSPR Map #:** 002

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat:** 41 47' N

**Long:** 124 15' W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go N. through Crescent City on U.S. Hwy 101 to Northcrest Drive MP 27.010. Take Northcrest Drive. Turn left on Washington Blvd. and continue to beach. At beach, turn right on Radio Road and continue to end. Vehicular access to the beach is possible through a locked gate at the end of Radio Road. (Contact Del Norte Co. Sheriff's Dept. (707) 464-4191

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Offshore rock. Rocky headland, wave-cut platforms, gravel beaches.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: shorebirds, seabirds, waterfowl (01-12), Seabird Rookeries(02-10): Black Oystercatchers, Western Gulls, Pelagic Cormorants, Pigeon Guillemots, Fork-tailed Storm Petrel(CSC). Above species present(01-12). Plovers and Turnstones not breeding. Marbled Murrelet(SE,FT)(01-12).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. State Park, Dan Scott and Jeff Bomke

(707) 464-9533

Reservation Ranch

(707) 487-3516

Pt St George Medical Clinic, Dr. Mabris

(707) 464-3364

Ca. DFG, Wildlife Division

(707) 445-6493

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-008 Castle Rock Nat'l Wildlife Refuge

**OSPR Map #:** 002

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat:** 41 47' N

**Long:** 124 15' W

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Boat/Avon access is extremely difficult. May be observed from the W. end of Washington Blvd. in Crescent City. Contact refuge manager immediately (see telephone number below). This is a national wildlife refuge and public access is prohibited.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

- Offshore rock; National Wildlife Refuge

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Common Murre, Pigeon Guillemot, Leach's Storm Petrel, Cassin's Auklet, Western Gull, Brandt's and Pelagic Cormorants. Rhinoceros Auklet and Tufted Puffins, both (CSC). Above species present(01-12). California Brown Pelican(FE)(04-11) and Aleutian Canada Goose(FT)(10-11;02-04) use as roosting area. Peregrine Falcon(FE)(01-12).

B. Marine Mammals: Elephant Seals (pupping(), haul-out(01-12)); Steller Sea Lion(FT)(01-12), Ca. Sea Lion, Pacific Harbor Seals juveniles, adults, sub-adults - haul-out(01-12).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

USFWS, Humboldt Bay NWR and Castle Rock NWR (707) 733-5406

Manager: Kevin Foerster

USFWS, Resource Damage Assessment (916) 978-4866

National Marine Fisheries Service, Joe Cordaro (310) 980-4017

- responsible for marine mammals

Ca. DFG, Wildlife and Marine Res. Div. (707) 445-6493

Del Norte County Sheriff's Dept. (24 hr.) (707) 464-4191

Ca. DFG - OSPR Dispatch (24 hr.) (916) 445-0045

# CASTLE ROCK NATIONAL WILDLIFE REFUGE

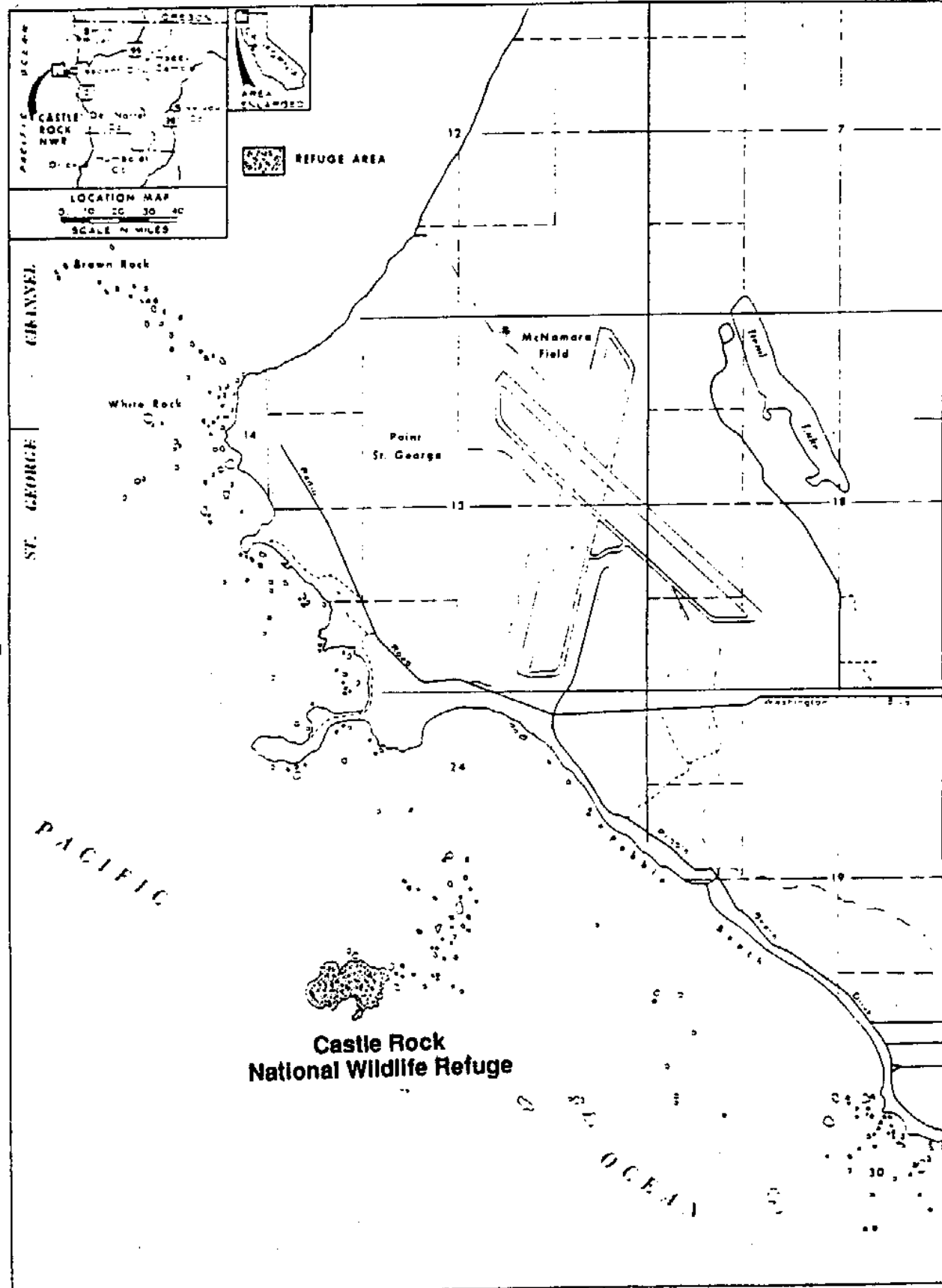
Del Norte County, California

UNITED STATES  
DEPARTMENT OF THE INTERIOR

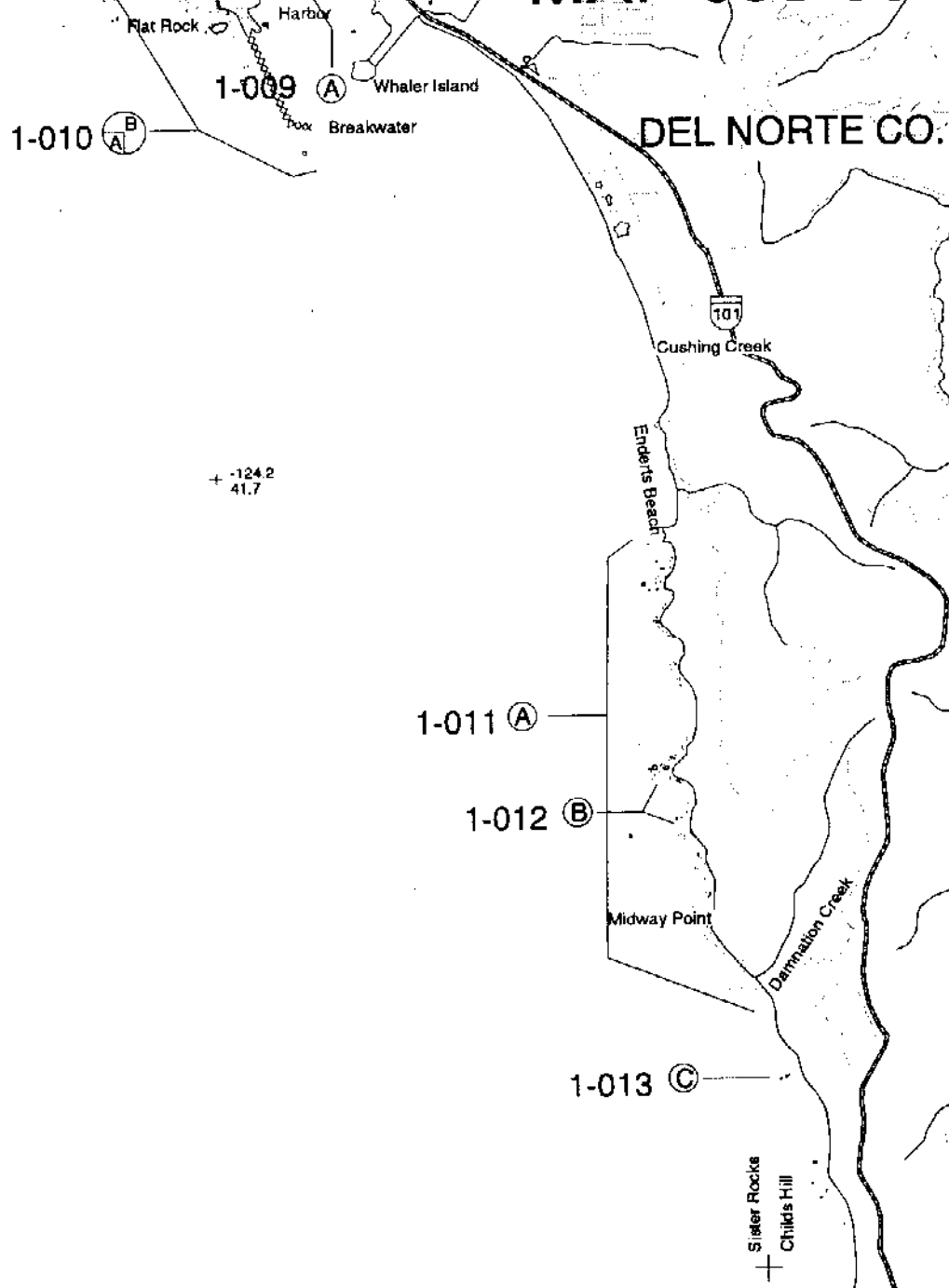
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FISH AND WILDLIFE SERVICE

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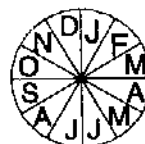
# MAP 003-004



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993

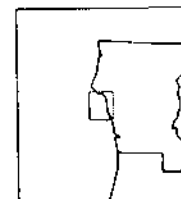


SEASONALITY

SCALE = 1:58443

0 1 2 3 MILES  
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of "Sister Rocks" and "Childs Hill"

The comparable NOAA nautical chart is "Trinidad Head to Cape Blanco"



## SITE SUMMARY SHEET

**SITE:** A-1-009 Elk Creek and Crescent City Harbor

**OSPR Map #:** 003-004

**County:** Del Norte

**USGS 7.5' Quad. name:** Crescent City

**NOAA Chart:** 18603

**Lat/Long:** 41 45'/124 12'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go north on U.S. Hwy 101 into Crescent City. Turn left onto Front St. The mouth of Elk Creek and parking areas parallel Front St. A boat launch is available on south side near Whaler's Isl. Hoist or Citizen's Dock. Whaler's Isl. is off 101, turn W. onto Anchor Drive. Citizen's Dock is off 101, turn W. onto Citizen's Dock Road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal flat with limited fringe marsh. Creek has riprap north of mouth, and a sandy beach to the south. Creek flows into developed com'l and rec'l harbor.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: wading birds, waterfowl incl. Common Loon and Western Grebe(CSC); all(01-12). Several T & E/CSC species use the harbor for feeding especially in summer and fall.

- Elegant Tern(CSC)(07-10)
- Fork-tailed Storm Petrel(CSC)(02-10)
- Rhinoceros Auklet(CSC)(01-12)
- Osprey(CSC)(01-12)
- Ca. Brown Pelican(FE,SE)(04-11)
- Marbled Murrelet(FE,SE)(01-12)

B. Fish: anadromous species: Coho salmon(FPT), Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:

- spawning runs(10-06)
- smolts/juveniles(02-08)
- Herring spawn(12-03); larval and juveniles(03-08)

C. Haul-outs for Harbor Seals and Ca. Sea Lions(01-12)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Inland Fish Divisions  
Del Norte County Sheriff's Dept. (24 hr.)  
Crescent City Harbor District  
Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-6493  
(707) 464-4191  
(707) 464-6174  
(707) 445-0045

# SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

SITE NAME/NO ELY Creek / Crescent City Harbor A-1-009

## CHECK-LIST

- / North arrow
- / Scale
- High-Tide Line
- Low Tide Line
- substrate type

## LEGEND

o o o o o boom skimmer

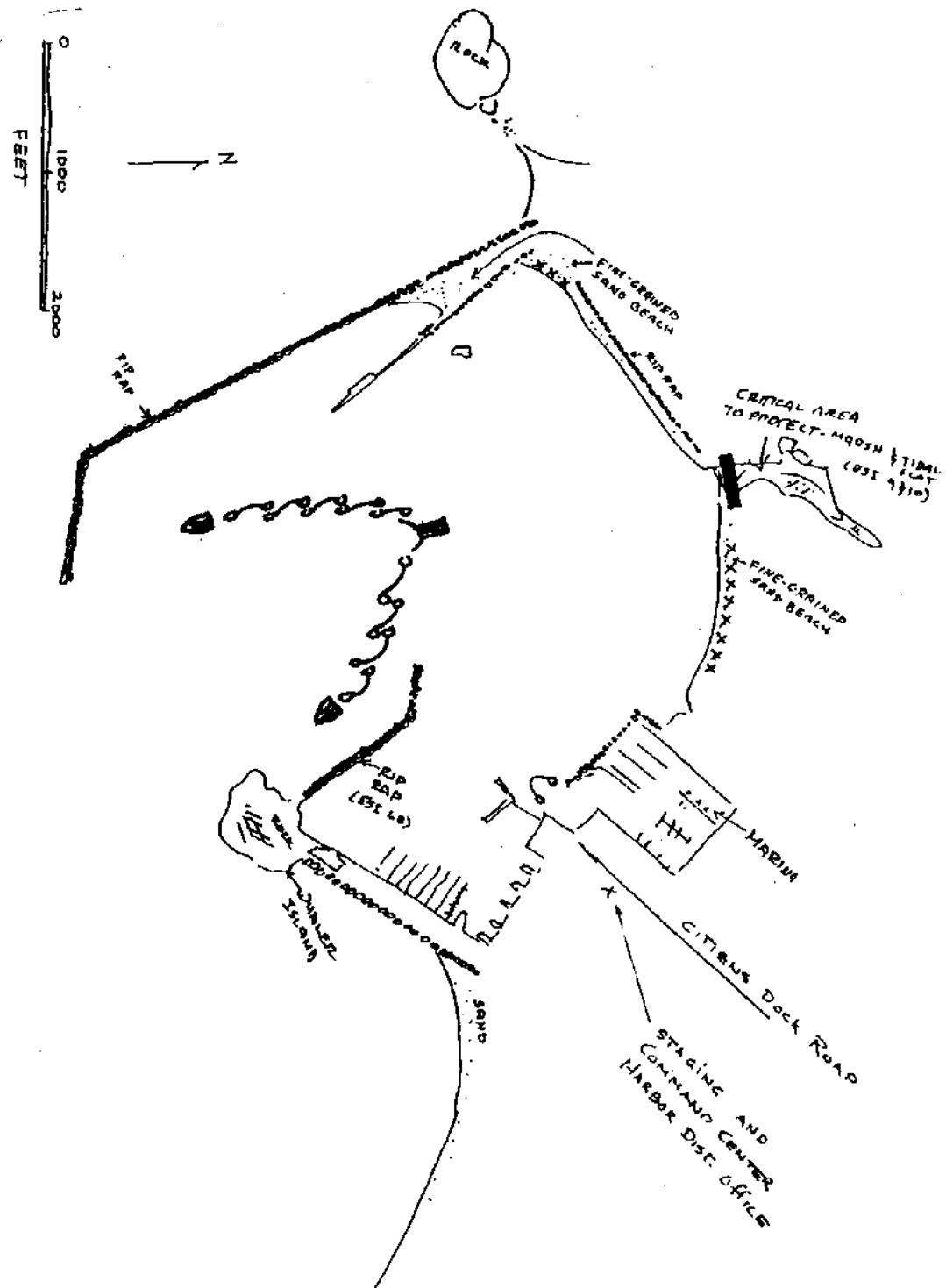
-xxxxxxx- oil catchment area

Y salt-water marsh

fresh-water marsh

High-tide overwash zone

Low high-tide swash line



## SITE SUMMARY SHEET-OPA90

**SITE:** A-1-010 Battery Point

**OSPR Map #:** 003-004

**County:** Del Norte

**Lat:** 4144'30" N

**USGS 7.5' Quad. name:** Sister Rocks

**Long:** 124 12'30" W

**NOAA Chart:** 18603

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go north on U.S. Hwy 101 into Crescent City. Turn left(west) onto Front Street and continue to its end. Turn left(south) and continue to parking lot at Battery Point. Boats may be launched from several locations within Crescent City harbor. (Citizen's Dock off Citizen's Dock Road exiting from U.S. Hwy 101; also at the end of Anchor Drive exiting from U.S. Hwy 101).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks and kelp beds

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds:

1. Marbled Murrelet(FE)(01-12)
  - Fledglings on water(07-09)
  - adults (01-12) AREA OF FREQUENT SIGHTINGS.

2. Ca. Brown Pelican (FE,SE)

B. Kelp beds

C. Harbor seals

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife Division

(707) 445-6493

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Crescent City Harbor District

(707) 464-6174

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-011 D.N. Coast Redwoods St Pk.

**OSPR Map #:** 003-004

**County:** Del Norte

**USGS 7.5' Quad. name:** Sister Rocks

**NOAA Chart:** 18603

**Lat/Long:** 41 40'/124 08'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S.hwy 101 S. from Crescent City. Exit onto Enderts Beach Road at MP 23.85. Continue to parking lot at road end. Access to beach areas via foot trails.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks, Rocky headlands from Enderts Beach to Damnation Creek.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(04-09): Brandt's and Pelagic Cormorants, Western Gulls, Common Murres, Pigeon Guillemots. Above species present(01-12). Double-crested Cormorant(CSC)

- Breeding/nesting(03-09)

- Marbled Murrelets(FE,SE)(01-12) feed in open water areas.

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. State Park, Dan Scott and Jeff Bomke

(707) 464-9533

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Redwood National Park

(707) 464-6101

Ca. DFG, Wildlife and Marine Res. Div.

(707) 445-6493

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-012 Scat Beach

**OSPR Map #:** 003-004

**County:** Del Norte

**USGS 7.5' Quad. name:** Sister Rocks

**NOAA Chart:** 18603

**Lat:** 41 40'23" N

**Long:** 124 08'22" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

None.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Exposed vertical sea wall and offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Marine Mammals: Important area for Pacific Harbor Seals. Over 500 animals counted in 1991.

- pupping(03-06)

- haul-out(01-12)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Redwood National Park

(707) 464-6101

Ca. State Park, Dan Scott and Jeff Bomke

(707) 464-9533

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

Ca. DFG, Wildlife and Marine Res. Div.

(707) 445-6493

Del Norte County Sheriff's Dept. (24 hr.)

(707) 464-4191

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-013 Last Chance Rock

**OSPR Map #:** 003-004

**County:** Del Norte

**USGS 7.5' Quad. name:** Childs Hill

**NOAA Chart:** 18600

**Lat:** 41 38'05"N

**Long:** 124 07'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Access by boat only.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Pelagic Cormorant, Western Gull, Pigeon Guillemot. Area also used as roosts(01-12).

B. Raptors: Peregrine Falcon(FE)(01-12)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Redwood National Park

Ca. DFG, Wildlife Division

Del Norte County Sheriff's Dept. (24 hr.)

Ca. DFG - OSPR Dispatch (24 hr.)

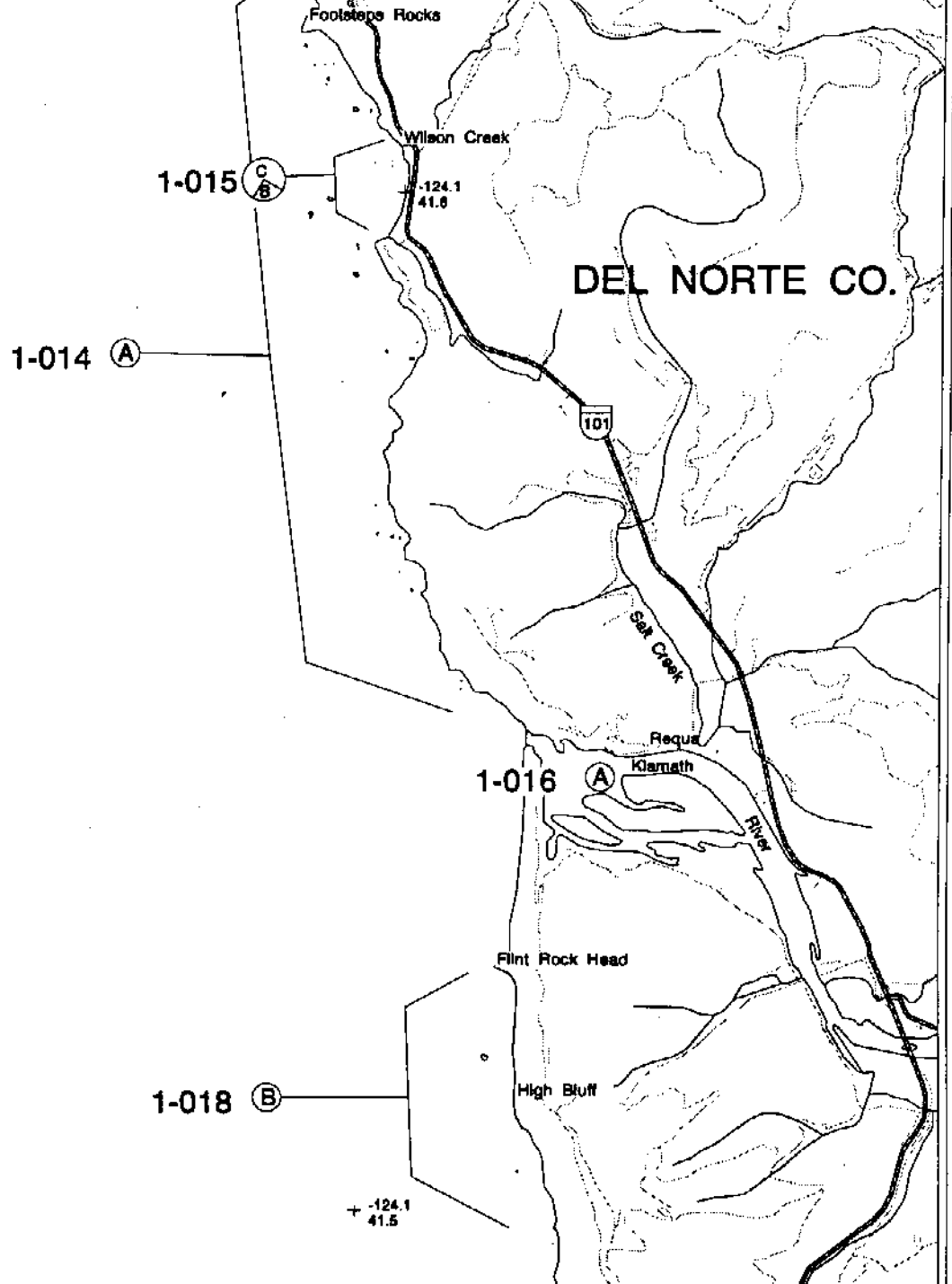
(707) 464-6101

(707) 445-6493

(707) 464-4191

(916) 445-0045

# MAP 005

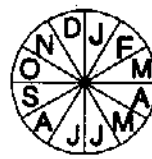


## ENVIRONMENTAL SENSITIVITY RANKING



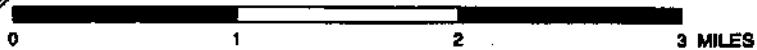
- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



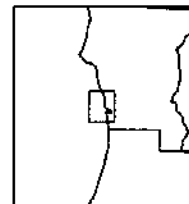
SEASONALITY

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ALBERS PROJECTION - NORTH AMERICAN 1983

## INDEX MAP



This map includes USGS quad sheets of Requa

The comparable NOAA nautical chart is "Trinidad Head to Cape Blanco"

Chart Number: 18600

## SITE SUMMARY SHEET

**SITE:** A-1-014 **Footsteps Rocks to Radar Station Rocks**

**OSPR Map #: 005**

**County:** Del Norte

**USGS 7.5' Quad. name:** Requa

**NOAA Chart:** 18600

**Lat/Long:** 41 35'/124 06'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 S. from Crescent City. Exit onto Enderts Beach Road MP 23.85. Continue to parking lot at roads' end. Access by foot via Damnation Creek Trail to Footsteps Rocks. Access to Radar Station Rocks area via trail from B-1-015.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks, rocky headland, gravel beaches, tidal inlet.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Common Murre (>26,000 obs. on False Klamath Rock) Brandt's and Pelagic Cormorant, Pigeon Guillemot, Western Gull, Black Oystercatcher. Above species present(01-12): Double-crested Cormorant(CSC); Breeding/nesting(03-09) Brown Pelican - roosts on False Klamath Rock; Raptors: Peregrine Falcon(FE)(01-12)

B. Marine Mammals: haul out areas near south end of this site.

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Redwood National Park	(707) 464-6101
Ca. State Park, Dan Scott and Jeff Bomke	(707) 464-9533
Ca. DFG, Wildlife and Marine Res. Div.	(707) 445-6493
USFWS, Resource Damage Assessment	(916) 978-4866
Del Norte County Sheriff's Dept. (24 hr.)	(707) 464-4191
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045



## SITE SUMMARY SHEET

**SITE:** B-1-015 Wilson Creek and Lagoon Ck

**OSPR Map #:** 005

**County:** Del Norte

**Lat/Long:** 41 35'45"/124 06'

**USGS 7.5' Quad. name:** Requa

**Rev:** 07/01/96

**NOAA Chart:** 18600

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Alongside U.S. Hwy 101 about 15 miles south of Crescent City Parking area for Wilson Creek Beach, MP 12.642, is immediately off hwy. 101 on the west side. Lagoon Creek is located about 100 yds. to the south, and parking area is adjacent to the lagoon. Parking is also available to the east off hwy 101 at the Youth Hostel.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Course grain to granule beach. Extensive log debris near the mouth of Lagoon Creek.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Shorebirds, seabirds, waterfowl:

1. California Brown Pelican (FE,SE)(04-11)
2. Harlequin Duck (CSC)(01-04;09-12) mouth of Wilson Crk.

B. Fish (Anadromous salmonids): Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts.

- spawning runs(08-06)
- smolts/juveniles(02-08)
- Surfsmelt spawn (03-07)

C. Marine mammals eg. Sea Lions present

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. State Park, Dan Scott and Jeff Bomke

(707) 464-9533

Redwood National Park

(707) 464-6101

Ca. DFG, Wildlife and Marine Resources Div.

(707) 445-6493

Del Norte County Sheriff's Dept.

(707) 464-4191

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

# INLET SKETCH MAP

Wilson Creek  
Inlet Name Inlet, CA.

Recorder(s) MOH/TM4

Date/Time 13 Nov. 1992: 0930

Tide Stage Low 0.641 (+3.4); Crescent City

Inlet Classification D

## CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

## LEGEND

XXXXXXX

Recommended  
Oil-Catchment Area

✓

Salt-Water Marsh

✓

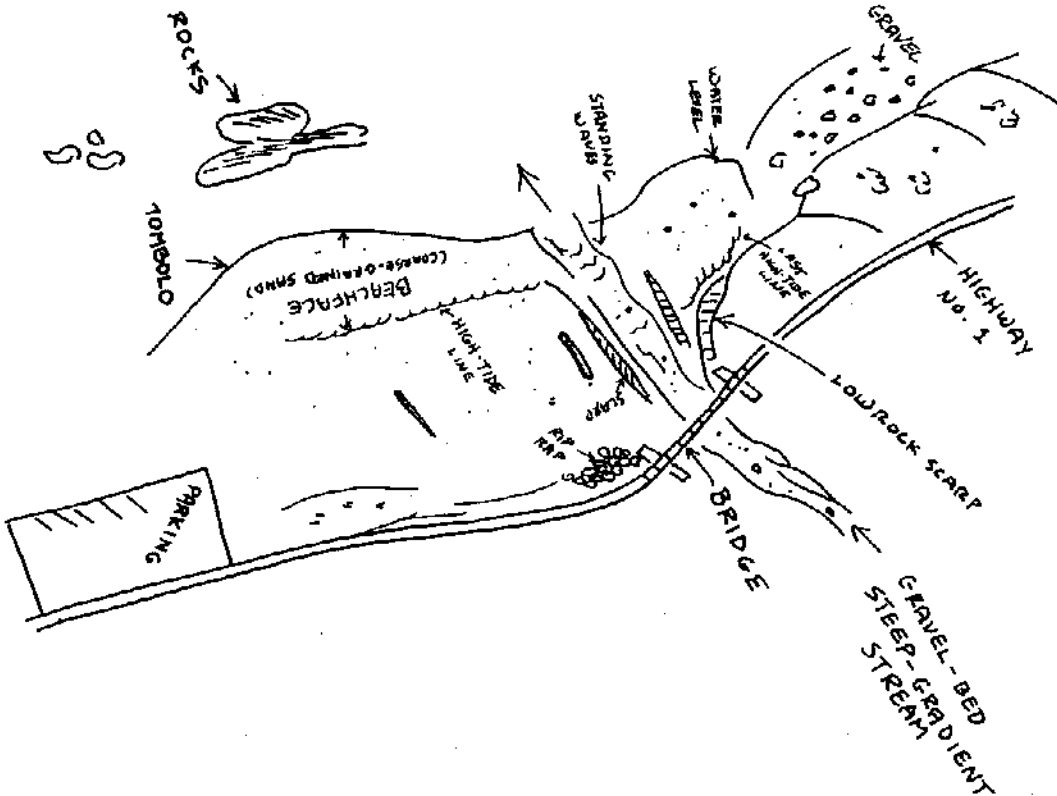
Fresh-Water Marsh

→

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



## SITE SUMMARY SHEET

**SITE:** B-1-016 Klamath River Mouth

**OSPR Map #:** 005

**County:** Del Norte

**Lat/Long:** 41 32' 30"/124 05'

**USGS 7.5' Quad. name:** Requa

**Rev:** 07/01/96

**NOAA Chart:** 18600

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go north from Eureka on U.S. Hwy 101. The south side of the river and Klamath Cove R.V. Park are accessible from the Mouth of the Klamath Road at MP 4.038, just south of the Klamath River bridge. Exit east and turn west under the hwy. The north side of the road is accessible via Requa Road on the north side of the bridge at MP 4.424. Exit east and follow signs to Requa Resort and Cafe (Mouth of Klamath Road) or Klamath River boat ramp (old town site).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Fine to medium grained sand beach. The mouth of the river may migrate over a period of years from the north or south end of the beach to the other end, a distance of about 1.5 miles.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: coastal seabirds, shorebirds, wading birds, waterfowl incl. loons and grebes(01-12)

1. Raptors: Bald Eagle and Peregrine Falcon, both (FE); Osprey(CSC) - all(01-12) California Brown Pelican (FE,SE)(04-11)

B. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:

-spawning runs(08-06)

-juveniles/smolts(03-08)

1. Anadromous fish: Green Sturgeon - larvae and juveniles in estuary; Pacific Lamprey - runs upstream along shore; Tidewater Goby(FE)(01-12)

C. Marine Mammals: Pacific Harbor Seal haul-out areas Steller Sea Lions (FE) seasonal; River otters

\* Immature of both species may be present at any month along the shore.

**ARCHAEOLOGICAL CONCERNS:** Yes.

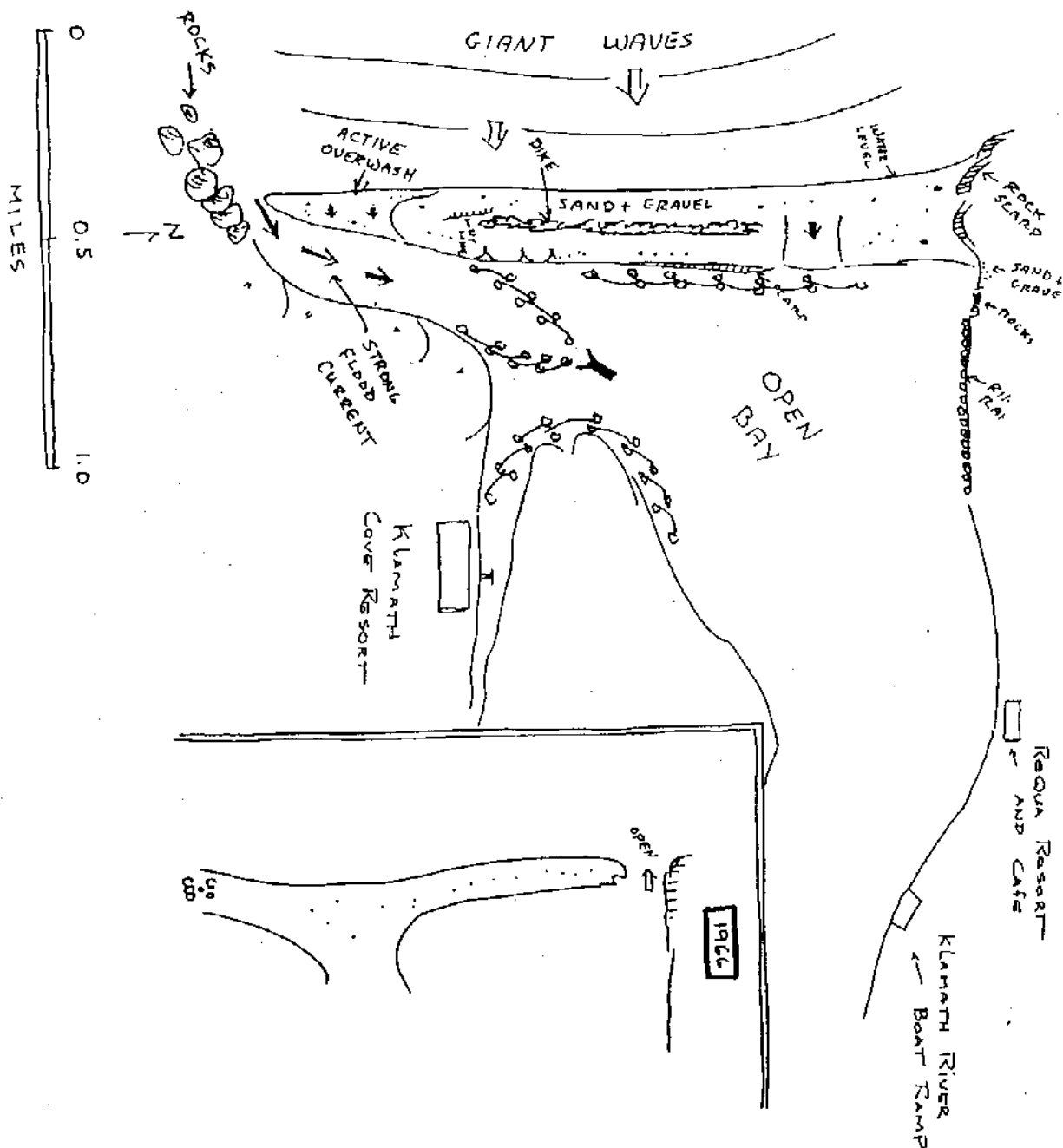
# SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

SITE NAME/NO. KLAMATH RIVER MOUTH A-1-015

**CHECK-LIST**  
 North Arrow  
 Scale  
 High-Tide line  
 Low-Tide line  
 substrate type

## LEGEND

boom skimmer  
 oil  
 catchment area  
 salt-water marsh  
 fresh-water marsh  
 High-tide overwash zone  
 Last high-tide swash line



**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bureau of Indian Affairs (707) 482-8185  
USFWS, Fisheries Assistance Office (707) 822-7201  
Redwood National Park (707) 464-6101  
Del Norte County Sheriff's Dept. (24 hr.) (707) 464-4191  
Ca. DFG, Wildlife, Inland Fish, and Marine Div (707) 445-6493  
Ca. DFG - OSPR Dispatch (24 hr.) (916) 445-0045  
National Marine Fisheries Service, Joe Cordaro (310) 980-4017

## SITE SUMMARY SHEET

**SITE:** B-1-018 Flint Rock and White Rock

**OSPR Map #:** 005

**County:** Del Norte

**Lat/Long:** 41 30'30"/124 05'

**USGS 7.5' Quad. name:** Requa

**NOAA Chart:** 18600

**Other:**

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

White Rock - offshore.

Flint Rock - exposed rocky cliffs/headland.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabirds: Pelagic Cormorant, Western Gull, Pigeon Guillemot, Double-crested Cormorant(CSC) all(01-12), Ca. Brown Pelican(FE,SE)(04-11), Peregrine Falcon(FE)(01-12)

**ARCHAEOLOGICAL CONCERNS:** Yes

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                           |                |
|-------------------------------------------|----------------|
| Redwood National Park                     | (707) 464-6101 |
| Ca. DFG, Wildlife Division                | (707) 445-6493 |
| USFWS, Resource Damage Assessment         | (916) 978-4866 |
| Del Norte County Sheriff's Dept. (24 hr.) | (707) 464-4191 |
| Ca. DFG - OSPR Dispatch (24 hr.)          | (916) 445-0045 |

# Annex E: Environmentally Sensitive Sites

## Humboldt County

|                                                                    |            |
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| <b>SITE: A-1-020 Redding Rock .....</b>                            | <b>96</b>  |
| <b>SITE: A-1-022 Redwood Creek .....</b>                           | <b>97</b>  |
| <b>SITE: A-1-023 Stone Lagoon .....</b>                            | <b>100</b> |
| <b>SITE: A-1-024 Dry Lagoon State Beach .....</b>                  | <b>101</b> |
| <b>SITE: A-1-026 Big Lagoon .....</b>                              | <b>102</b> |
| <b>SITE: A-1-027 Patricks Pt. to Trinidad Head .....</b>           | <b>104</b> |
| <b>SITE: A-1-028 Trinidad Bay and McConnahas Mill Creek .....</b>  | <b>106</b> |
| <b>SITE: A-1-030 Little River Beach .....</b>                      | <b>107</b> |
| <b>SITE: B-1-031 Clam Beach .....</b>                              | <b>109</b> |
| <b>SITE: A-1-032 Mad River .....</b>                               | <b>111</b> |
| <b>SITE: A-1-034, Mad River Slough .....</b>                       | <b>114</b> |
| <b>SITE: A-1-035, Humboldt Bay Inlet and Samoa Peninsula .....</b> | <b>115</b> |
| <b>SITE: A-1-036, North Humboldt Bay .....</b>                     | <b>118</b> |
| <b>SITE: A-1-037 Palco Marsh .....</b>                             | <b>126</b> |
| <b>SITE: A-1-038 Elk River .....</b>                               | <b>128</b> |
| <b>SITE: A-1-040 South Humboldt Bay .....</b>                      | <b>131</b> |
| <b>SITE: A-1-041 South Spit .....</b>                              | <b>134</b> |
| <b>SITE: A-1-042 Eel River .....</b>                               | <b>135</b> |
| <b>SITE: B-1-046 Centerville Beach .....</b>                       | <b>139</b> |
| <b>SITE: A-1-047 False Cape Rock .....</b>                         | <b>140</b> |
| <b>SITE: B-1-048 Bear River .....</b>                              | <b>142</b> |
| <b>SITE NAME: A-1-049 Cape Mendocino .....</b>                     | <b>143</b> |
| <b>SITE: A-1-050 Steamboat Rock .....</b>                          | <b>144</b> |
| <b>SITE: C-1-051 Capetown .....</b>                                | <b>146</b> |
| <b>SITE: B-1-052 Hair Seal Rock .....</b>                          | <b>147</b> |
| <b>SITE: A-1-053 Mattole River .....</b>                           | <b>148</b> |
| <b>SITE: B-1-054 Cooskie Creek .....</b>                           | <b>151</b> |
| <b>SITE: C-1-055 Shubrick Peak .....</b>                           | <b>152</b> |
| <b>SITE: B-1-056 Shelter Cove and Cormorant Hotel .....</b>        | <b>153</b> |

+ -124.1  
41.6

MAP 006

Split Rock

DEL NORTE CO.

HUMBOLDT CO.

Oasagon Creek

1-019 ©

+ -124.1  
41.4

Home Creek



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

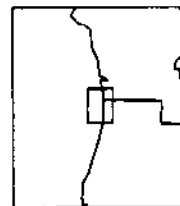
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0 1 2 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-93-NC

## INDEX MAP



This map includes USGS quad sheets of Fern Canyon

The comparable NOAA nautical chart is Trinidad Head to Cape Blanco



# SITE SUMMARY SHEET

**SITE:** C-1-019 Gold Bluffs Beach

**OSPR Map #:** 006,007

**County:** Humboldt

**USGS 7.5' Quad. name:** Fern Canyon

**NOAA Chart:** 18600

**Lat/Long:** 41 24'/124 04'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101 to Davidson Road MP 123.82. Go west to Gold Bluffs Beach (3 miles).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Fine to medium grain sand beach starting at Ossagon Creek (north end) south to Big Lagoon. Espa Lagoon is located here, but far enough from the beach that impacts are unlikely.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Fish: Surfperch spawn (4-6)

Surfsmelt (5-7)

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Marine Resources Division

(707) 445-6493

Prairie Creek Redwoods State Park

(707) 445-6547

Redwood National Park

(707) 464-6101

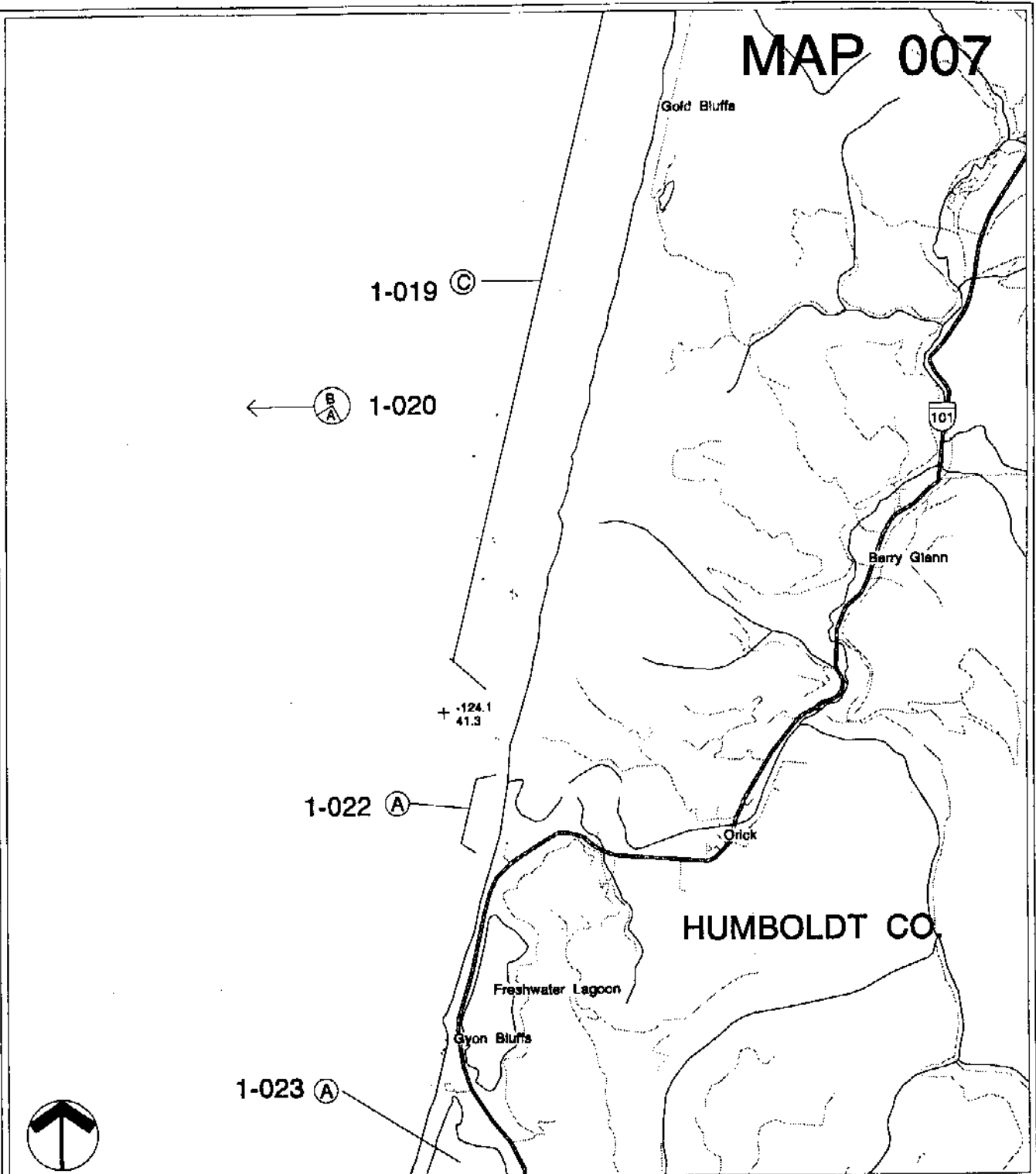
Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

# MAP 007

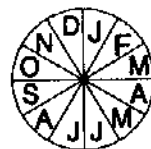


## ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993

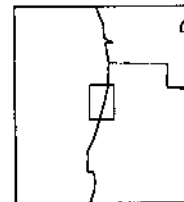


SEASONALITY

SCALE = 1:50914

0 1 2 MILES  
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Orick

The comparable NOAA nautical chart is Trinidad to Cape Blanco

## SITE SUMMARY SHEET

**SITE:** A-1-020 Redding Rock

**OSPR Map #:** 007

**County:** Humboldt

**USGS 7.5' Quad. name:** Orick

**NOAA Chart:** 18600

**Lat:** 41 20'30" N

**Long:** 124 05'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access. Rock lies about 6 miles offshore. Boat access limited because of steep sides. Survey area by helicopter.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Marine mammals: Steller Sea Lions(FE)(01-12) in low numbers.

B. Seabirds: Common Murres, Brandt's Cormorant, Western Gulls, Pigeon Guillemot

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Marine Div.

National Marine Fisheries Service, Joe Cordaro

Ca. DFG - OSPR Dispatch (24 hr.)

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-6493

(310) 980-4017

(916) 445-0045

(707) 445-7251

## SITE SUMMARY SHEET

**SITE:** A-1-022 Redwood Creek

**OSPR Map #:** 007

**County:** Humboldt

**USGS 7.5' Quad. name:** Orick

**NOAA Chart:** 18600

**Lat/Long:** 41 17'30"/124 05'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. hwy 101 - South bank access: Turn W. to Redwood N. Pk. Visitor Center 2 miles south of Orick. Mouth of creek is near Visitor Ctr.

North bank access: Continue on hwy 101 into Orick and over the bridge. Turn left onto Hufford Road MP 121.228 and continue to the end of the road. Access to the creek mouth may be possible via construction roads along the top of river riprap.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Estuary and sandy beach with a limited freshwater marsh. Riprapped stream banks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Raptors incl. Bald Eagle and Peregrine Falcon, both(FE), Osprey(CSC); all (01-12). Snowy Plover (FE)(01-12) - Critical nesting period (04-07). Nests directly on sand within dunes. California Brown Pelican (FE,SE)(04-11)

B. Fish: anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS), Tidewater Goby (FE) (01-12) and Coastal Cutthroat(CSC) trouts:

- spawning runs(08-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish, Marine Div.  
Redwood National Park  
Humboldt County Sheriff's Dept. (24 hr.)  
Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-6493  
(707) 464-6101  
(707) 445-7251  
(916) 445-0045

# SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

SITE NAME/NO Redwood Creek / A-1-022

## CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

## LEGEND

—xxxxxxx—

Recommended  
Oil-Catchment Area

⌊ ⌊

Salt-Water Marsh

⌊

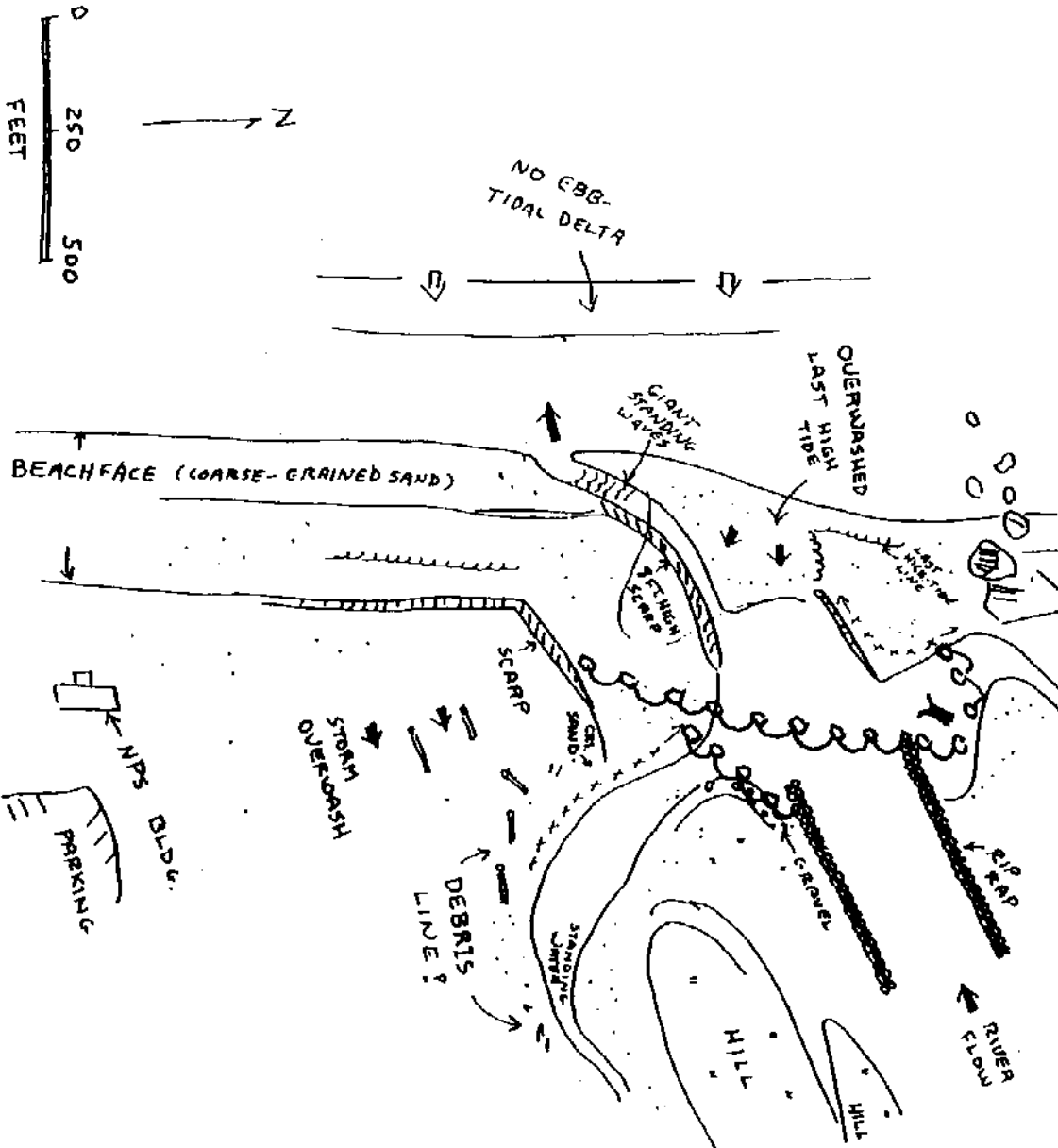
Fresh-Water Marsh

→ →

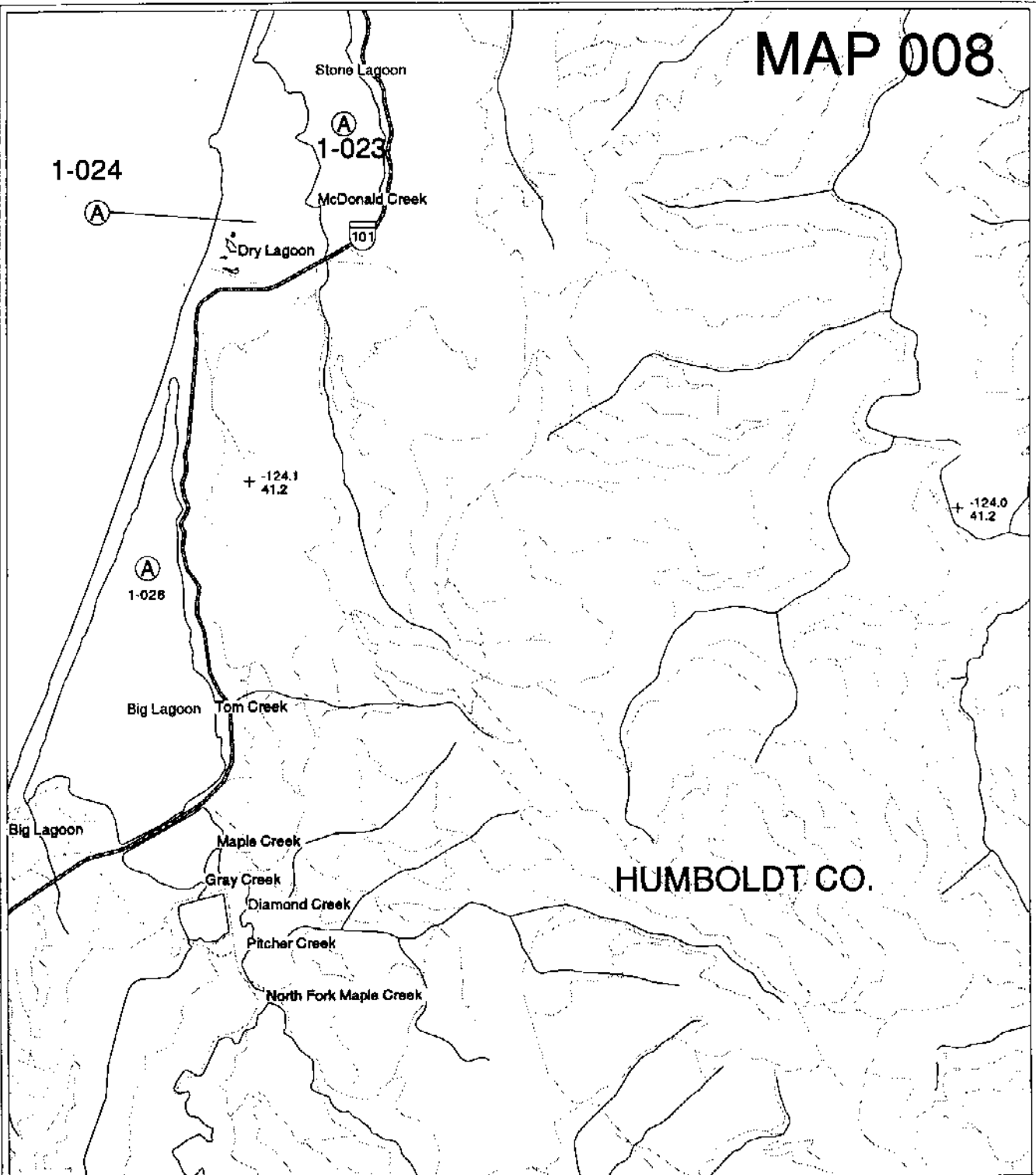
High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



# MAP 008



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

SCALE = 1:51566

0 1 2 MILES  
ALBERS PROJECTION NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Rodgers Peak

The comparable NOAA nautical chart is Trinidad Head to Cape Blanco

## SITE SUMMARY SHEET-OPA90

**SITE:** A-1-023 Stone Lagoon

**OSPR Map #:** 007,008

**County:** Humboldt

**Lat/Long:** 41 15'/124 05'30"

**USGS 7.5' Quad. name:** Orick

**Rev:** 07/01/96

**NOAA Chart:** 18600

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101. Hwy 101 skirts the east side of the lagoon and access points are visible just off the highway. A boat launch ramp and visitor's center are located alongside the highway. A coastal access road is available on the north end of the lagoon. Parking is available at the visitor's ctr. and at the end of the coastal access road. 4WD access to the SW corner where the lagoon generally breaches is possible from the parking lot at the end of the coastal access road. Skiffs may be launched at the State Park HQ.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Coastal lagoon with freshwater marsh. Separated from the ocean by a fine to medium grain sand beach. Infrequently open to the ocean.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Waterfowl, Loons, Grebes Raptors incl. Bald Eagle and Peregrine Falcon both (FE), Osprey(CSC); all(01-12). Golden Eagle(CSC). California Brown Pelican(FE,SE)(04-11). Proposed Snowy Plover Critical Habitat - sand dunes between the ocean and lagoon(Fed'l). Snowy Plover(FT)(01-12) - critical nesting period (04-07). Nests directly on sand within dunes.

B. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS), Tidewater Goby (FE) (01-12) and Coastal Cutthroat (CSC) trouts:  
- spawning runs(08-06) when lagoon breaches  
- juveniles/smolts(01-12)

C. Plants: Humboldt Bay Owl's Clover \*

D. Marine mammals feed in surf and nearshore.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Inland Fish Div.

(707) 445-6493

Redwood National Park

(707) 464-6101

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-024 Dry Lagoon State Beach

**OSPR Map #:** 008

**County:** Humboldt

**USGS 7.5' Quad. name:** Rodgers Peak

**NOAA Chart:** 18600

**Lat/Long:** 41 14'/124 07'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go N. on Hwy 101. Turn left onto road marked Day Use Dry Lagoon State Park near MP 114.457.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Outer beach: coarse grain to granule beach separates ocean from saltwater and freshwater marshes High tides and strong winter storms can push water to the beach crest.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Waterfowl California Brown Pelican (FE,SE)(04-11) Raptors incl. Peregrine Falcon(FE)(01-12) Proposed Snowy Plover Critical Habitat - sand dunes between the ocean and Lagoon (Fed'l). Snowy Plover(FT)(01-12) - critical nesting period(04-07). Nesting directly on sand within dunes.

B. Fish: Tidewater Goby(FE)(01-12), Surfperch spawning(04-06).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish, Marine Div

(707) 445-6493

Ca. State Parks

(707) 445-6547

Redwood National Park

(707) 464-6101

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



## SITE SUMMARY SHEET

**SITE:** A-1-026 Big Lagoon

**OSPR Map #:** 008

**County:** Humboldt

**Lat/Long:** 41 10'30"/124 07'

**USGS 7.5' Quad. name:** Rodgers Peak

**Rev:** 07/01/96

**NOAA Chart:** 18600

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101. Turn left onto Round House Road 108.250 and follow signs to county park. Various access points are available (by foot from hwy 101) on east side of lagoon. Access to the north end of the lagoon where breaching occurs is possible only by traversing the beach (about 2 miles).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

The lagoon is separated by a spit, which is seasonally open to the ocean. The lagoon is open freshwater and saltwater marshes. The spit is fine to granule sand.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Waterfowl; California Brown Pelican (FE,SE)(04-11), Raptors incl. Peregrine Falcon and Bald Eagle both (FE), and Osprey(CSC); all(01-12). Proposed Snowy Plover Critical Habitat is sand dunes between the ocean and lagoon. Snowy Plover(FT)(01-12) critical nesting period(04-07) nesting directly on sand within dunes.

B. Fish:

1. Tidewater Goby(FE)(01-12)

2. Anadromous salmonids: Coho(FPT) and Chinook(CSC)salmons, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:

- spawning(08-06) when lagoon breaches
- juveniles/smolts(01-12)

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Inland Fish Div.

(707) 445-6493

Humboldt County Parks

(707) 445-7651

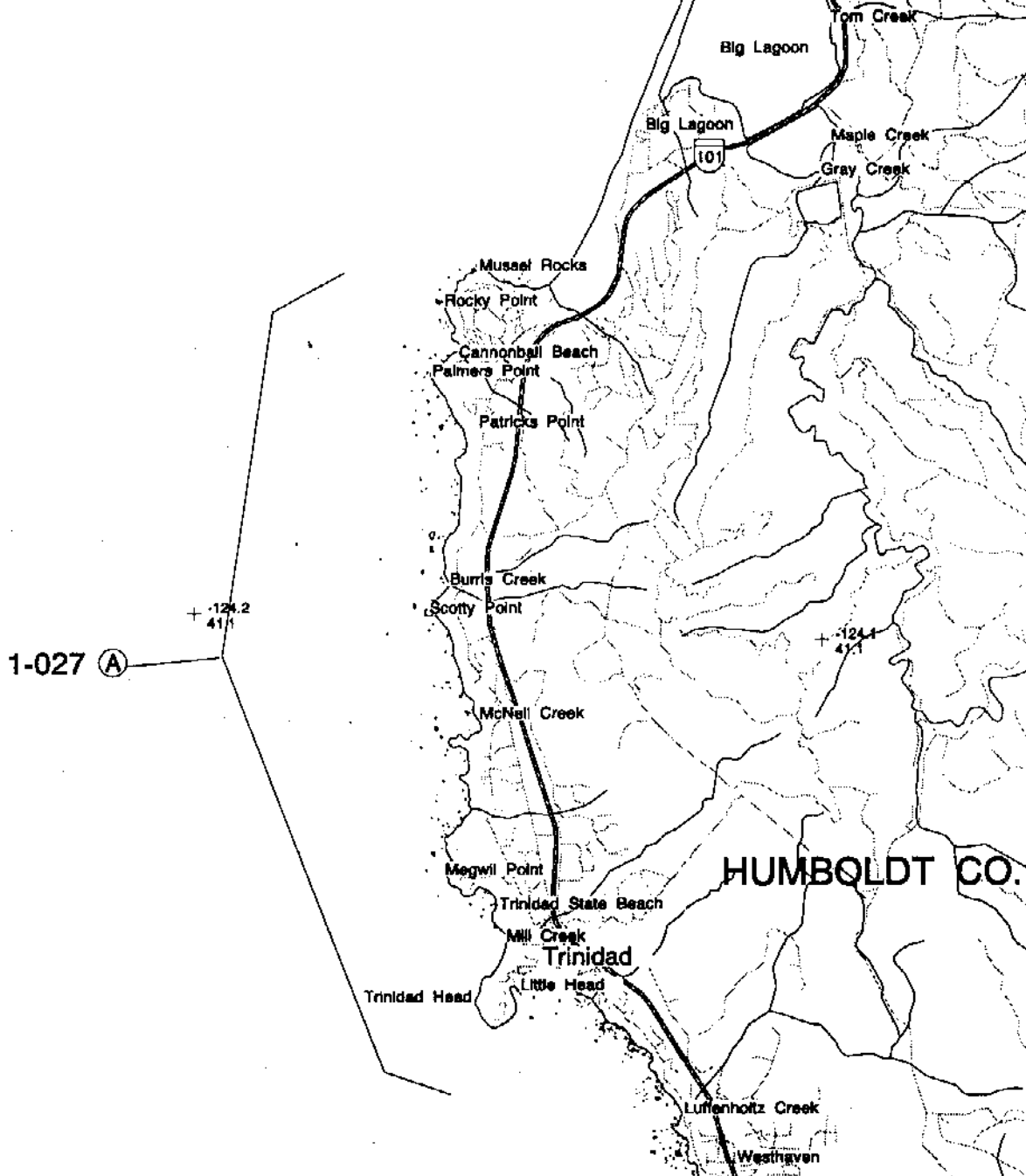
Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

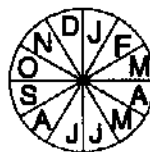
# MAP 009



## ENVIRONMENTAL SENSITIVITY RANKING

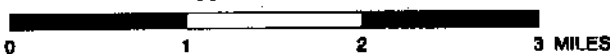
- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

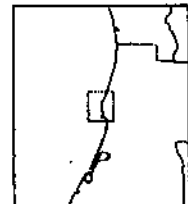
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ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927



## INDEX MAP



This map includes USGS quad sheets of Trinidad

The comparable NOAA nautical chart is Trinidad Head to Cape Blanco

## SITE SUMMARY SHEET

**SITE:** A-1-027 **Patricks Pt. to Trinidad Head**

**OSPR Map #: 009**

**County:** Humboldt

**USGS 7.5' Quad. name:** Trinidad

**NOAA Chart:** 18600

**Lat/Long:** 41 06'/124 10'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go N. on U.S. Hwy 101. Take Patrick's Point State Park exit, MP 105.926, onto Patrick's Point Drive. Parking and access available at several locations within the park. Trinidad State Beach - from hwy 101 take Trinidad exit, MP 100.644. Turn lt. onto Main St., then rt. onto Stagecoach Rd to beach. Also, from Main St. turn lt. onto Trinity St. - lt. onto Edwards St. to the beach parking area at the end of Edwards St.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Predominantly wave-cut platforms backed by gravel beaches. Pockets of fine to medium grained sand beaches. Exposed rock cliffs and many offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Large seabird colonies offshore(01-12), serve as rookeries(03-09); Green Rock - >55,000, Flatiron Rock - >24,000, Pilot Rock - >2,500, Pelagic and Brandt's Cormorants > 2000. Cassins Auklet, Western Gull, Black Oystercatcher, Fork-tailed Storm Petrel(CSC), Rhinoceros Auklet(CSC) and Tufted Puffin(CSC) also present. Common Murres >80,000; Pigeon Guillemots.

B. Mammals: River Otter, Harbor Seals, Ca. Sea Lions throughout area. Also hauled out on rocks Gray Whales (FE)(01-12).

C. Fish: Juvenile rockfish nursery habitat. Coastal Cutthroat Trout (CSC)(01-12) present in perennial streams throughout area. Anadromous when streams flow to ocean.

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish and Marine Division

(707) 445-6493

Ca. State Parks

(707) 445-6547

City of Trinidad

(707) 677-0223

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

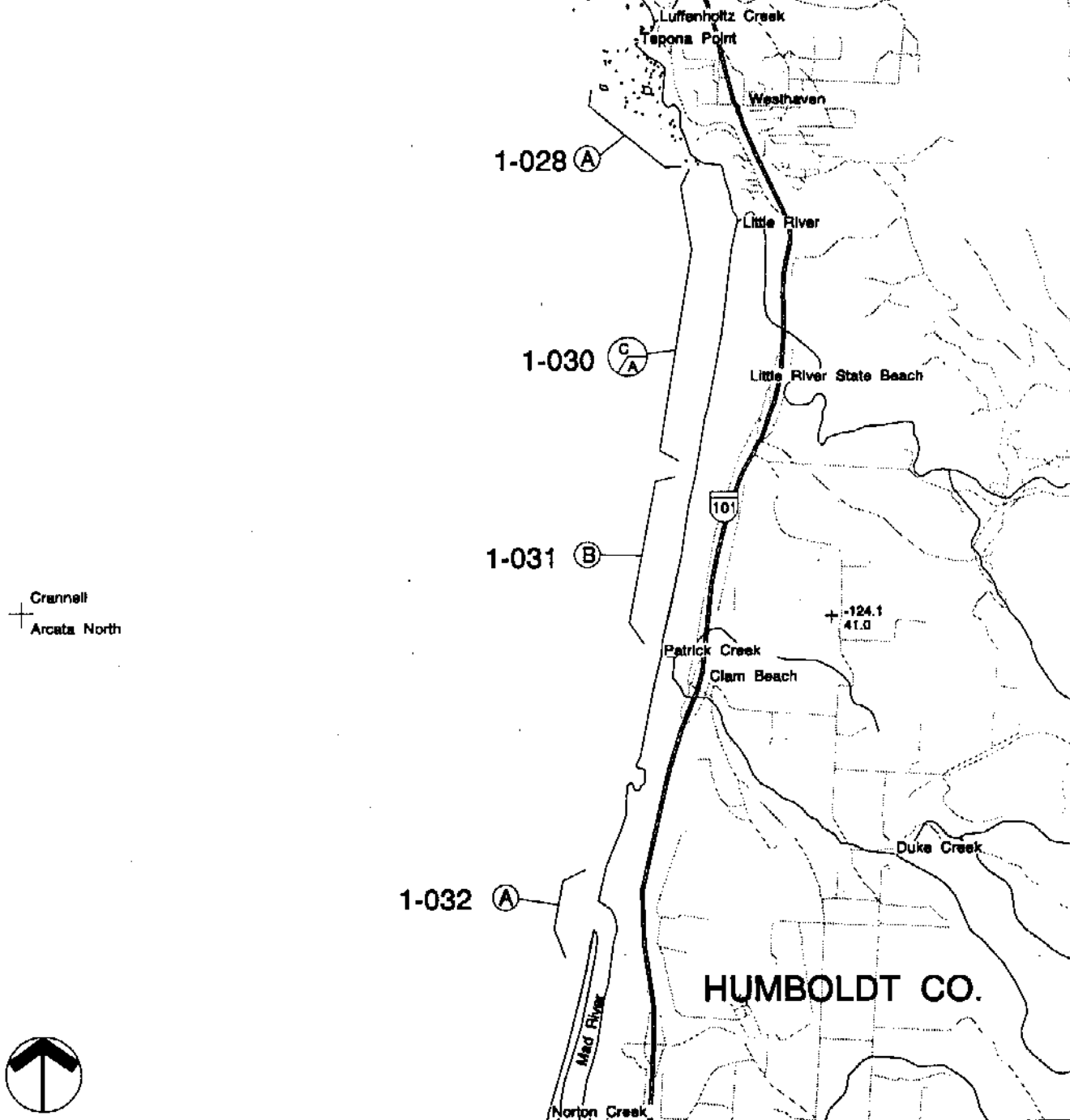
Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca.DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# MAP 010-011



## ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

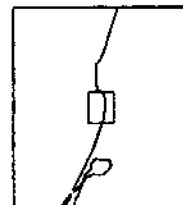
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0 1 2 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-105-NC

## INDEX MAP



This map includes USGS quad sheets of Grannell and Arcata North

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** A-1-028 Trinidad Bay and McConnahas Mill Creek      **OSPR Map #:** 010-011

**County:** Humboldt

**USGS 7.5' Quad. name:** Crannell

**Lat:** 41 02'30" N

**Long:** 124 07'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101. Exit at Trinidad MP 100.644 and turn left onto Main St. Turn left again (road next to Salty's) onto Scenic Dr. Various access points along this road from footpaths. Launching facilities are available at Trinidad Harbor. Continue on Main St and turn left onto Trinity St. Turn left from Trinity St. onto Edwards St. The harbor is at the east end of the parking area.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Minor tidal inlet at McConnahas Mill Creek. Offshore rocks. Rocky headlands. Fine to medium grain sand beaches. Some gravel beaches.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Seabirds colonies throughout area(01-12). Serves as rookeries(03-09). See site A-1-027 for species in area. Double-crested Cormorant(CSC)(01-12), California Brown Pelican(FE,SE)(04-11).

B. Mammals: River otters, Harbor Seals, Sea Lions, Porpoises

C. Fish: Anadromous salmonids: Coho(FPT) salmon and Coastal Cutthroat(CSC) trout. Spawns in coastal streams and creeks in area.  
Nursery habitat for juvenile rockfish and Surfperch spawning (04-06).

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish and Marine Div  
Ca. State Parks  
Humboldt County Sheriff's Dept. (24 hr.)  
Ca. DFG - OSPR Dispatch (24 hr.)  
National Marine Fisheries Service, Joe Cordaro

(707) 445-6493  
(707) 445-6547  
(707) 445-7251  
(916) 445-0045  
(310) 980-4017

## SITE SUMMARY SHEET

**SITE:** A-1-030 Little River Beach

**OSPR Map #:** 010-011

**County:** Humboldt

**Lat/Long:** 41 01'124 06'30"

**USGS 7.5' Quad. name:** Crannell

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101. Take Westhaven Drive exit MP 98.003. Turn left under freeway and left again onto Scenic Drive. Continue to Merryman's Restaurant and turn right on un-named road. Road ends at mouth of Little River and parking lot. Heavy equipment can access the beach from the parking lot.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet. Fine to medium grain sand beach. Exposed tidal flat. Salt water marsh.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Snowy Plover(FE)(01-12) - Critical nesting period(04-07). Nests directly on sand within dunes.

B. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts. Surfperch also present (04-06).

- spawning runs(08-06)
- juveniles/smolts(04-07)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife Div.

(707) 445-6493

Ca. State Parks

(707) 445-6547

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

LITTLE RIVER

Inlet Name INLET, CA.

Recorder(s) MOH/THH

Date/Time 12 Nov 1972; 1615

Tide Stage Low @ 1920 (-1.1);

HIGH/DEAD  
DAY

Inlet Classification C

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

XXXXXXX

Recommended  
Oil-Catchment Area

✓ ✓

Salt-Water Marsh

W

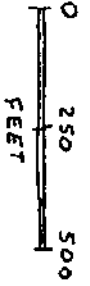
Fresh-Water Marsh

→ →

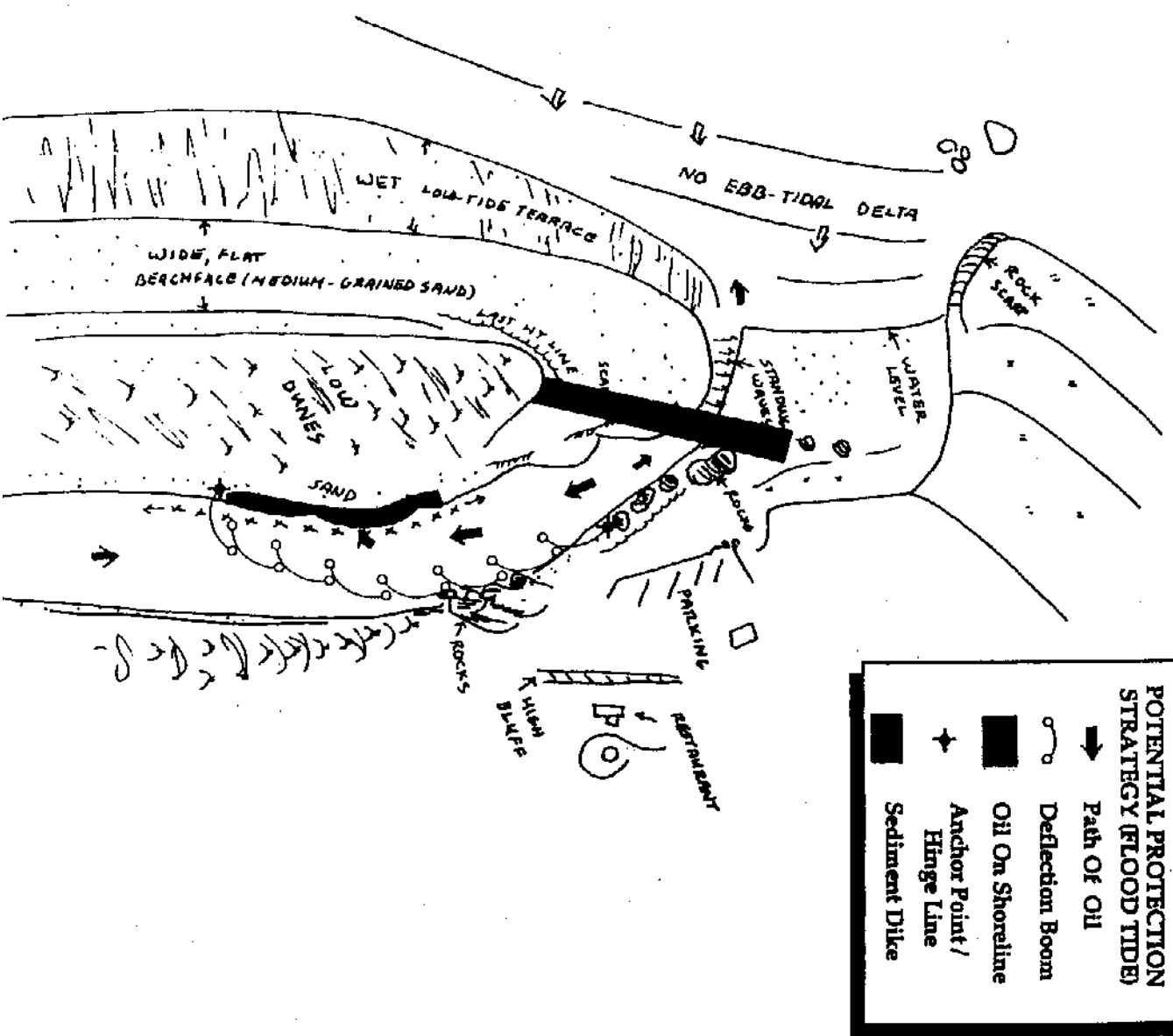
High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



N



## SITE SUMMARY SHEET

**SITE:** B-1-031 Clam Beach

**OSPR Map #:** 010-011

**County:** Humboldt

**Lat/Long:** 41 00'/124 07'

**USGS 7.5' Quad. name:** Crannell

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go N. on Hwy 101. Take Clam Beach County Park exit. Turn left under freeway overpass and then continue left on Clam Beach County Park Road. Parking areas available on the west side of the road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

See RPI Tidal Inlet Study. Fine to medium grain sand beaches. Small tidal inlets at Strawberry and Patrick Creek

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Fish: Coastal Cutthroat trout(CSC) present in Patrick and Strawberry Creeks. These trout may be anadromous and present through beach area if creeks have enough flow.

B. Invertebrates: Pacific Razor Clams (01-12) and Dungeness Crab may bury themselves in sand in the inter and subtidal zones.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Inland Fish and Marine Res. Div.

(707) 445-6493

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



# MAP 012

1-032 → (A)

Mad River

Tye City

+ 124.2  
40.8

1-034 (A)

Mad River Slough

HUMBOLDT CO.

Liscom Slough

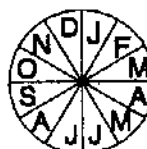


## ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



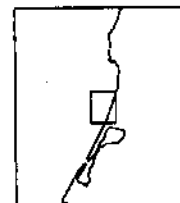
SEASONALITY

SCALE - 1:38868

0 1 2 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Tye City

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** A-1-032 Mad River

**OSPR Map #:** 010-12

**County:** Humboldt

**USGS 7.5' Quad. name:** Arcata North Tyee

**Lat/Long:** 40 58'/124 07' &

40 56' 30"/124 08'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go north on U.S. Hwy 101 for about 8 miles. Take Giuntoli Lane exit MP 88.618. Turn lt onto Janes Rd. Turn rt. onto Heindon Rd. Turn lt. onto Iverson Rd. Turn rt. onto Mad River Rd. and continue on this rd. to Mad River County Park. There is a boat ramp at this location. Another unimproved parking area and 4WD access to the beach is just N. of the county park area. Access to north shore difficult. CALTRANS should be contacted to open hwy guard rails near MP 94.479 to access riprap area.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Large river tidal inlet bounded on each side by fine to medium grained sand beaches. Riprap along north and northeast shoreline facing the ocean.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Wading birds, Waterfowl, Kingfishers (feeding and nesting), Raptors incl. Ospreys and Merlins (CSC), Peregrine Falcons; all(01-12). California Brown Pelican(FE,SE)(04-11) Snowy Plover(FE)(01-12) - critical nesting period (04-07). Nests directly on sand within dunes.

B. Mammals: Harbor Seals, Sea Lions feed in the estuary

C. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trout:

- spawning runs(08-06)
- juveniles/smolts(04-07)

Redtail Surfperch spawn on outer beaches (04-06).

D. Inverts: Dungeness crab nursery

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish and Marine Div (707) 445-6493

Humboldt County Parks (707) 445-7651

Humboldt County Sheriff's Dept. (24 hr.) (707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.) (916) 445-0045

National Marine Fisheries Service, Joe Cordaro (310) 980-4017


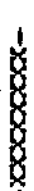
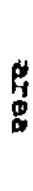
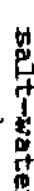
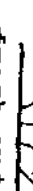

# SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

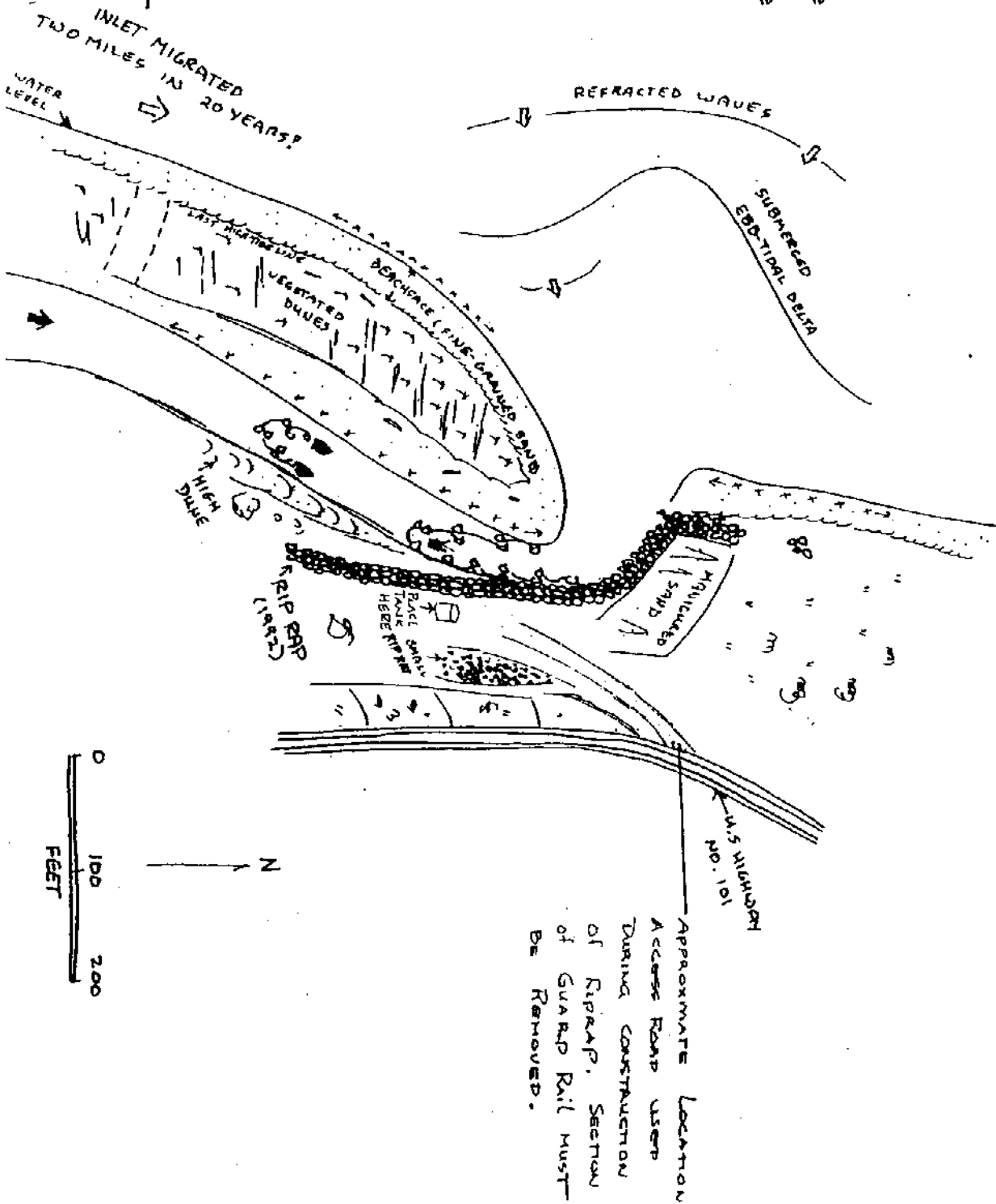
SITE NAME/NO MAD RIVER A-1-1-032

## CHECK-LIST

- North Arrow
- Scale
- High-Tide Line
- Low Tide Line
- substrate type

## LEGEND

-  boom skimmer
-  oil catchment area
-  salt-water marsh
-  fresh-water marsh
-  High-tide overwash zone
-  Last high-tide swash line



1-034 (A)

# MAP 013

1-035 (A)

(A)  
1-036

1-037 (A)

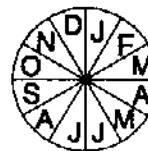
1-038 (A)



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



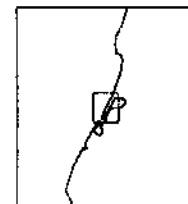
SEASONALITY

SCALE = 1:55985

0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Eureka

The comparable NOAA nautical chart is Humboldt Bay

## **SITE SUMMARY SHEET**

**SITE:** A-1-034, Mad River Slough

**RESPONSE OBJECTIVE:**

Prevent oil from entering the slough with exclusionary boom techniques.

**RESPONSE PROCEDURE:** See Humboldt Bay Geographic Response Plan

Deploy boom across the entrance from Humboldt Bay to Mad River Slough. Use intertidal boom on the shallow banks on either side of the slough channel. Join these to harbor boom crossing the deeper channel of the slough. Use sorbent boom behind the intertidal and harbor boom to contain entrained oil. If volume of oil is of sufficient quantity use skimmer and/or vacuum truck to collect oil in apex of hard boom.

**RECOMMENDED RESOURCES:** See Humboldt Bay Geographic Response Plan

Harbor boom (1200'), intertidal boom (100'), sorbent boom (100'), skimmer or vacuum truck or skimmer, oil containment equipment. Workmen (6).

**STAGING AREA:**

Sierra Pacific Industries at the mouth of Mad River Slough. Boom can be deployed from Sierra Pacific and towed into place, or deployed from the state Hwy 255 bridge crossing of the Slough.

**HAZARDS:**

Soft sediments in the Bay and around the mouth of the slough will hamper operations. Heavy traffic on state hwy is a hazard. Traffic control should be done.

**POTENTIAL PHYSICAL (not biological) IMPACTS FROM OIL:**

**CLEAN-UP STRATEGY:**

**COMMUNICATIONS:** Yes

## SITE SUMMARY SHEET

**SITE:** A-1-035, **Humboldt Bay Inlet and Samoa Peninsula**

### **RESPONSE OBJECTIVE:**

Contain and recover oil as it enters the Bay. Humboldt Bay is one of the more difficult areas to protect and one of the most sensitive inlet/estuary systems in the state.

**RESPONSE PROCEDURE:** See Humboldt Bay Geographic Response Plan. Also, See RPI Tidal Inlet Study, but note that RPI recommendations presume unlimited resources. The Humboldt Bay Geographic Response Plan presents a more realistic response procedure.

It is important to begin response immediately because of the large tidal prism of Humboldt Bay. Nearshore water can intrude into North Humboldt Bay (Arcata Bay) with a single tidal change of six (6) feet, and, depending upon wind and weather, could carry oil with it. Response to oil intruding into Humboldt Bay should be staged as follows.

1. The vessel/facility plan should be implemented immediately.  
Alert PGE to boom the cooling water inlet to the power plant at King Salmon (**Health and safety issue**).
2. On-water skimming and recovery should begin as soon as possible to limit the volume of oil. MSRC intends to station a fully assembled and operational shuttle barge system on the Bay.
3. Shoreside deflection/collection areas in the vicinity of the Bay entrance should be established. These include:
  - a. deflection/collection near the sand beach at the Bay end, south side, of the entrance channel. This is also the entrance to South Bay. Deploy boom in a northerly direction towards the center of the channel to deflect oil to a skimmer or vacuum truck located at the beach.
  - b. Deflection/collection directly east, on the opposite shore, at King Salmon, from the above location. Harbor boom should be deployed in a northerly direction, as shown on the sketch, to direct oil into a skimming system or vacuum truck.
  - c. Deflection/collection wherever possible along both the Samoa Peninsula side of North Bay Channel and along the Eureka side (See Geographic Response Plan for possible locations)
4. Deploy harbor boom and skimming systems in South Bay channels to recover oil before it is allowed to intrude further into the mud flats and eel grass meadows of South Bay (See Humboldt Bay Geographic Response Plan).
5. Implement response strategies for A-1-038 (Elk River), A-1-037 (Palco Marsh), and for Salmon Creek and White Slough (See Humboldt Bay Geographic Response Plan).

**RECOMMENDED RESOURCES:**

Harbor boom (3,000') feet, intertidal boom (500'), sorbent boom (300'), skiffs (6), recovered oil storage equipment (6 locations), workmen (40).

**STAGING AREA:**

Pacific Affiliates at 'A' St. dock, Parking lot S. end Woodley I. Marina, Murray Airport, LP Corporation in Samoa, PG&E power plant at King Salmon, Humboldt Forest Products dock, any of the shoreside areas identified for deflection/collection.

SBS deployment can be done by crane from Humboldt Forest Products dock at Fields Landing. The travelift at Humboldt Bay Marine Services in Fields Landing may be able to launch an SBS and should be investigated.

**HAZARDS:**

Swift tidal currents, waves that sometimes reach inside the Bay, soft sediments, mats of algae or eelgrass can entangle and stall outboard motors.

**POTENTIAL PHYSICAL (not biological) IMPACTS FROM OIL:**

Oiling of man-made structures within the Bay; oiling of riprap and dolosse that stabilize the entrance channel.

**CLEAN-UP STRATEGY:**

Any of the above may be appropriate for the variety of habitats within Humboldt Bay. The appropriate method will be determined by the Unified Command.

**COMMUNICATIONS:** Yes, however cellular circuits are often overloaded from normal commercial traffic. This could present a problem in the immediate stages of an incident.












SKETCH FOR SITE INFORMATION AND SPILL RESPONSE STRATEGY

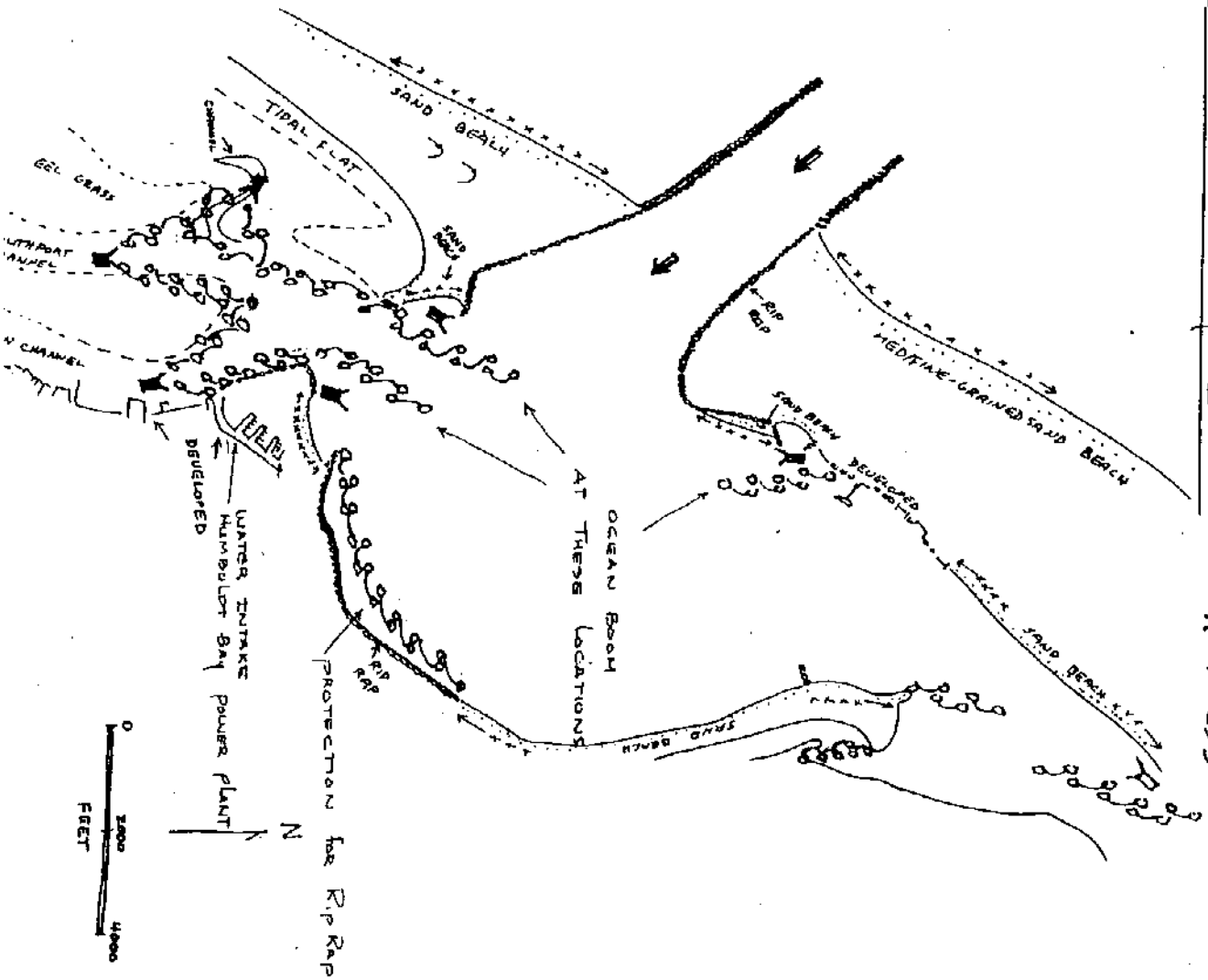
SITE NAME/NO Humboldt Bay Inlet

A-1-035

- CHECK-LIST
- North arrow
  - Scale
  - High-Tide Line
  - Low Tide Line
  - substrate type

LEGEND

-  North arrow
-  Scale
-  High-Tide Line
-  Low Tide Line
-  substrate type
-  boom skimmer
-  oil catchment area
-  salt-water marsh
-  fresh-water marsh
-  High-tide overwash zone
-  Last high-tide swash line





## SITE SUMMARY SHEET

**SITE:** A-1-036, North Humboldt Bay

**RESPONSE OBJECTIVE:**

The response objective is to prevent the intrusion of oil into North Humboldt Bay through on-water recovery and exclusionary booming south of the Samoa bridge that crosses Humboldt Bay. **Once oil has passed under the Samoa bridge and into North Humboldt Bay, response and clean-up will be almost impossible.**

**RESPONSE PROCEDURE:**

The response strategy for this area is designed to take advantage of Humboldt Bay currents and circulation on the flood tide. The faster currents and the greatest volume of water flow through the Samoa channel, but because of the prevailing NW wind, it is expected that the greatest amount of oil will be forced into the Eureka channel (between Indian and Woodley Islands) and the Inner Reach.

See Humboldt Bay Geographic Response Plan. Boom placement is designed to keep oil in main channels and away from shoreline impacts until it can be deflected to recovery locations at the tip of Woodley Island and in the Samoa Channel.

- 1) Keep oil in main channels by hinging deflection boom from the day marker at the tip of Indian Island with wings extending into the Samoa Channel (West) and the Eureka Channel (East).
- 2) A skimmer should be placed near the tip of Woodley Island with it's east wing (boom) extended across the Inner Reach to near Coast Oyster Company. The west wing consists of boom extended in cascading, 'herring bone,' configuration across Eureka Channel to near the tip of Indian Island. Some observations indicate that oil will tend to collect in this area because of Current circulation patterns, eddying, and prevailing winds.
- 3) Skimming in the Samoa Channel will be done from the 'hook' of one or more deflection booms angled South into the Samoa Channel in 'J' configuration. The skimmers and booms should be located in the vicinity of the LP Corporation docks for recovery by vacuum trucks.
- 4) Short lengths of harbor or intertidal boom should be used to keep oil from entering the channels that intrude into Indian Island, Woodley Island and Daby Island.
- 5) Harbor boom, backed by sorbent boom, should be extended across Eureka Slough from the N. abutment of the Railroad bridge to the S. abutment of the Highway 101 bridge. A skimmer should be used at this location, if possible.
- 6) Implement the strategy for A-1-038.
- 7) Harbor and intertidal boom may be extended across Jacoby Creek and Butcher Slough.

**RECOMMENDED RESOURCES:**

7,000 feet harbor boom, 500 feet sorbent boom, 5 skimmers, recovered oil storage containers (5 locations), 4 skiffs, associated anchors of appropriate type and weight, chain, and line needed to deploy boom, 52 persons.

**STAGING AREA:**

Staging areas: Pacific Affiliates at 'A' St. dock, Parking lot S. end Woodley I. Marina, Murray Airport, City of Arcata Corporation yard, Sierra Pacific Industries, LP Corporation in Samoa, Simpson Corporation in Fairhaven (plant that has been closed).

SBS deployment can be done by crane from Humboldt Forest Products dock at Fields Landing. The travelift at Humboldt Bay Marine Services in Fields Landing may be able to launch an SBS and should be investigated. Use of the Eureka City dock at the foot of Commercial Street should also be investigated.

**HAZARDS:**

Traffic hazards and limited parking along some highways. Soft sediments and shallow depths within much of North Humboldt Bay. The flight path for Murray Airport is over North Humboldt Bay.

**POTENTIAL PHYSICAL (not biological) IMPACTS FROM OIL:**

Oiling of manmade structures (commercial piers and marina). Penetration of light oils into invertebrate burrows.

**CLEAN-UP STRATEGY:**

None in marsh areas. Use sorbents wherever possible. WWW on manmade structures.

**COMMUNICATIONS:** Yes

FOR REFUGE INFORMATION CONTACT: 026-3415

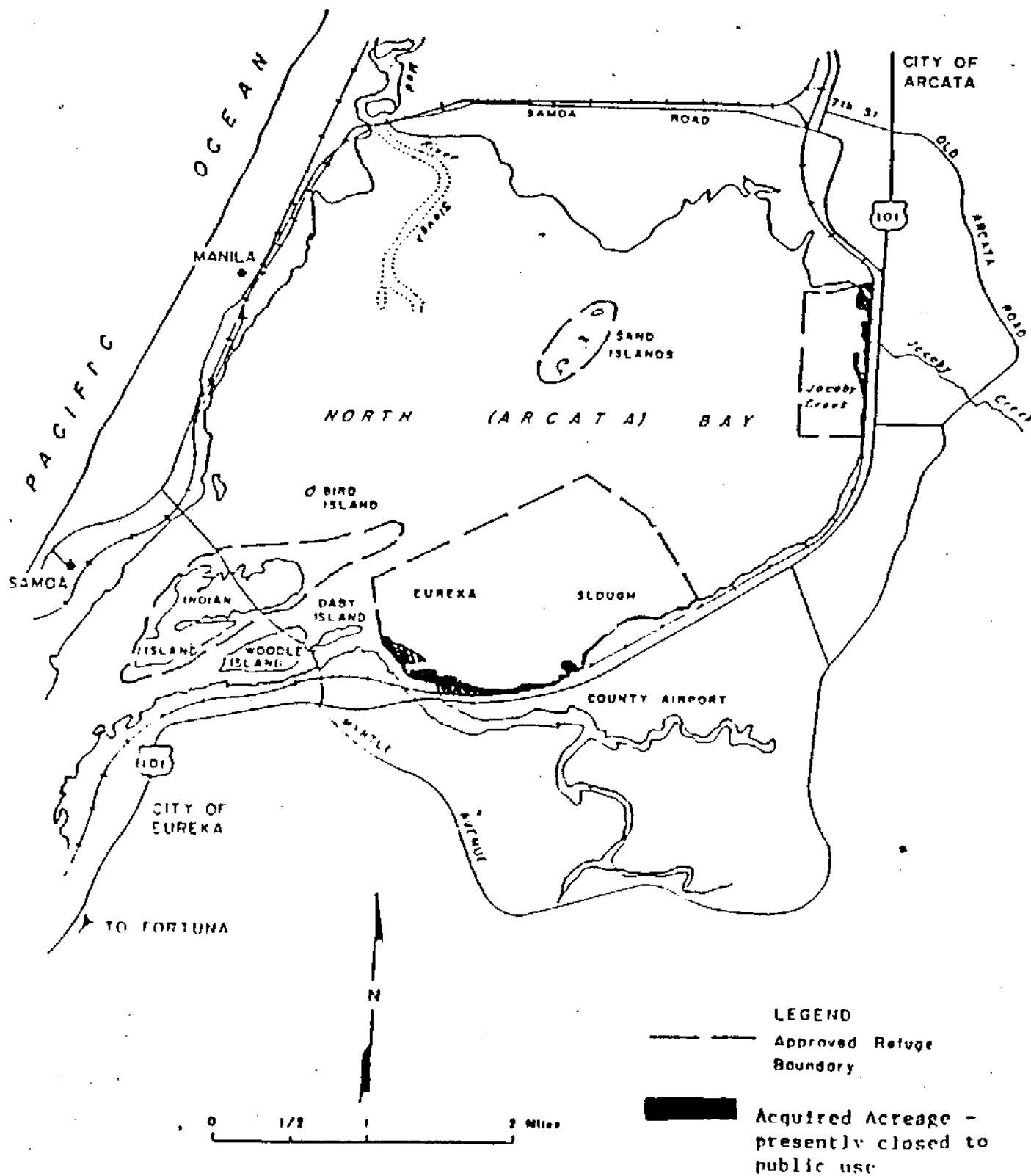
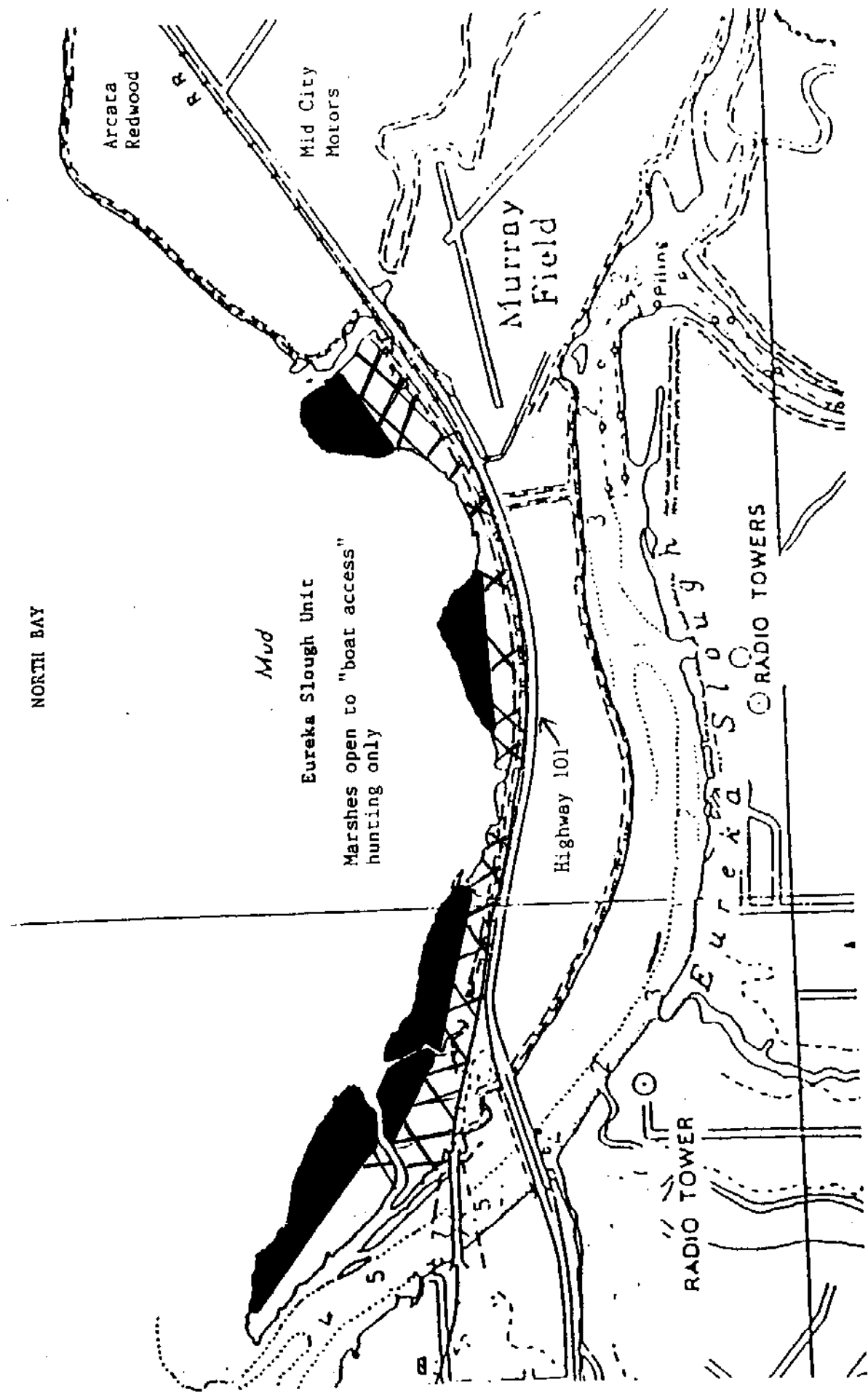


FIGURE 16. HUMBOLDT BAY NATIONAL WILDLIFE REFUGE - NORTH BAY -  
INDIAN ISLAND, SAND ISLANDS, JACOBY CREEK AND

E-120-NC

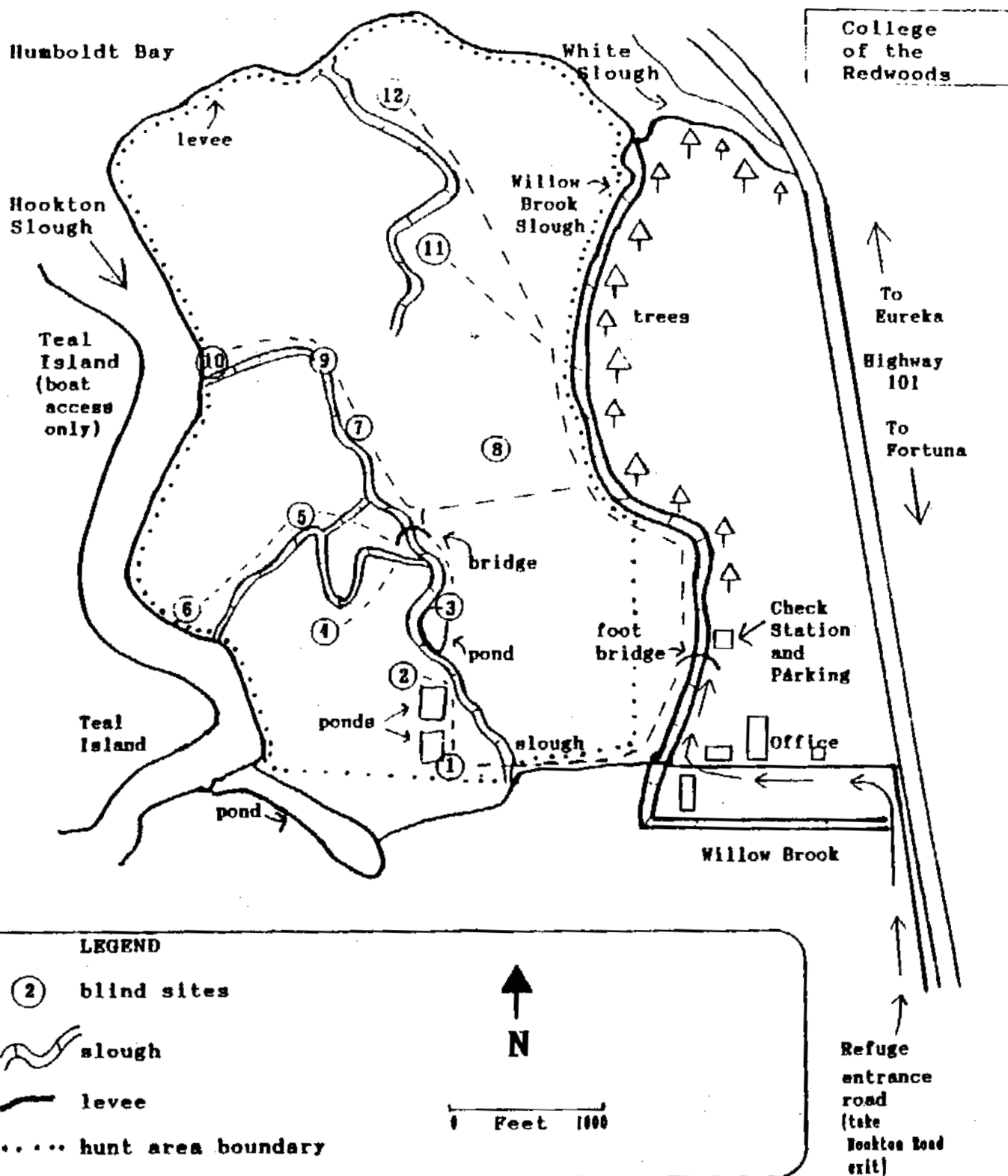


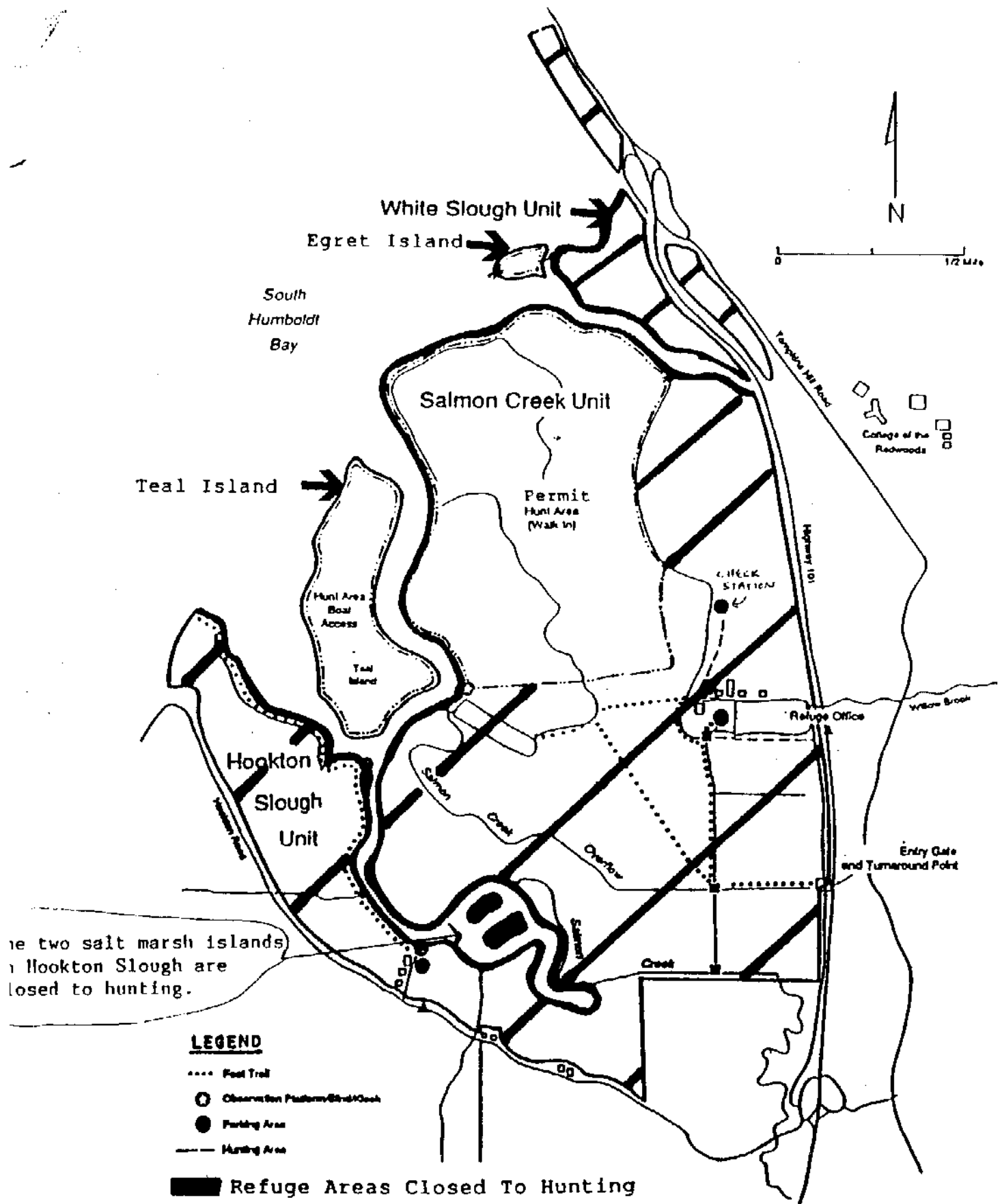


Eureka Slough Hunt Unit. North Humboldt Bay.  
E-122-NC



# HUMBOLDT BAY NATIONAL WILDLIFE REFUGE Salmon Creek Unit Hunt Area





All Dikes Of The White Slough, Salmon Creek, and Hookton Slough Units In South Humboldt Bay Will Be Closed To Hunting



## SITE SUMMARY SHEET

**SITE:** A-1-037 Palco Marsh

**OSPR Map #:** 013

**County:** Humboldt

**USGS 7.5' Quad. name:** Eureka

**NOAA Chart:** 18622

**Lat/Long:** 40 47'/124 11'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S.Hwy 101 SB in Eureka (South Broadway St.), take Del Norte St. (MP 77.250) W. and continue to the foot of Del Norte St. Gated access is located at the point where railroad tracks cross Del Norte St (the marsh is visible at this point).

Gated access is also possible from the foot of Vigo St or Bayshore Way (SB U.S.hwy 101 MP's 76.750 and 76.560).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Saltwater marsh hydraulically connected to Humboldt Bay by three 30" culverts. Adjoining the marsh and located on the bay are eelgrass meadows and exposed tidal flats.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: wading birds, shorebirds, waterfowl (01-12)

B. Fish: Pacific Herring spawn on eelgrass (on the bay side) (11-03)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

City of Eureka, David Hull or Gary Boughton

(707) 441-4206

or (707) 441-4187

Ca. DFG Wildlife and Marine Res. Div

(707) 445-6493

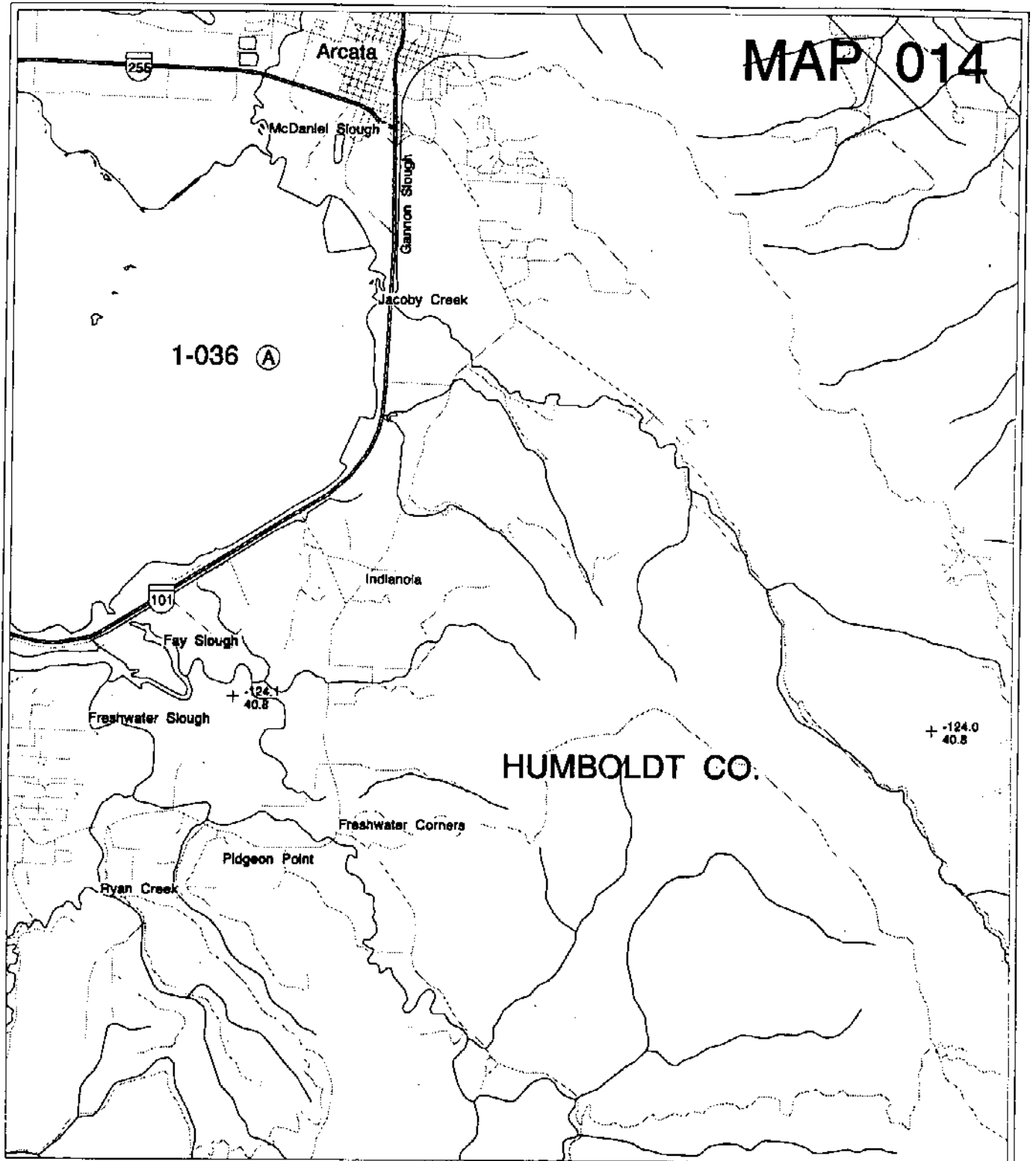
Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

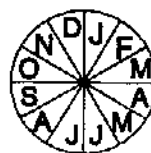
# MAP 014



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY



SCALE = 1:51912



ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Arcata South

The comparable NOAA nautical chart is Humboldt Bay

E 127 NC

## SITE SUMMARY SHEET

**SITE:** A-1-038 Elk River

**OSPR Map #: 013**

**County:** Humboldt

**USGS 7.5' Quad. name:** Eureka

**NOAA Chart:** 18622

**Lat/Long:** 40 46'/124 12'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From SB U.S.Hwy 101 (Broadway St.) in Eureka, take Hilfiker Lane (MP 75.740) west and continue to it's end at Elk River. Note that the Eureka sewage treatment plant is also located at the end of the street. Also, note that an abandoned oil storage facility owned by Oregon Coast Towing is located adjacent to this site.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet leading to a marsh complex. The inlet consists of sheltered tidal flats with eelgrass meadows. Elk River spit is fine to medium grained sand.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: wading birds, shorebirds, waterfowl(01-12), migratory waterfowl and shorebirds(10-04); Black Brant (10-06), Kingfishers, Great Egrets, Raptors incl. Ospreys(CSC)(01-12).

B. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trouts:

- spawning runs(08-06)
- juveniles/smolts(02-08)

Pacific Herring spawn on eelgrass 11-03. Larval and juvenile herring and flatfishes also utilize this area.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife, Inland Fish and Marine Div  
City of Eureka, David Hull or Clay Yerby

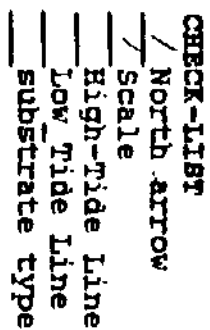
(707) 445-6493  
(707) 441-4206  
or (707) 441-4231

Humboldt County Sheriff's Dept. (24 hr.)  
Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-7251  
(916) 445-0045

## SITE NAME/NO

同大 入付書 / A-1-038



boom skimmer

011

## catchment

**2103**

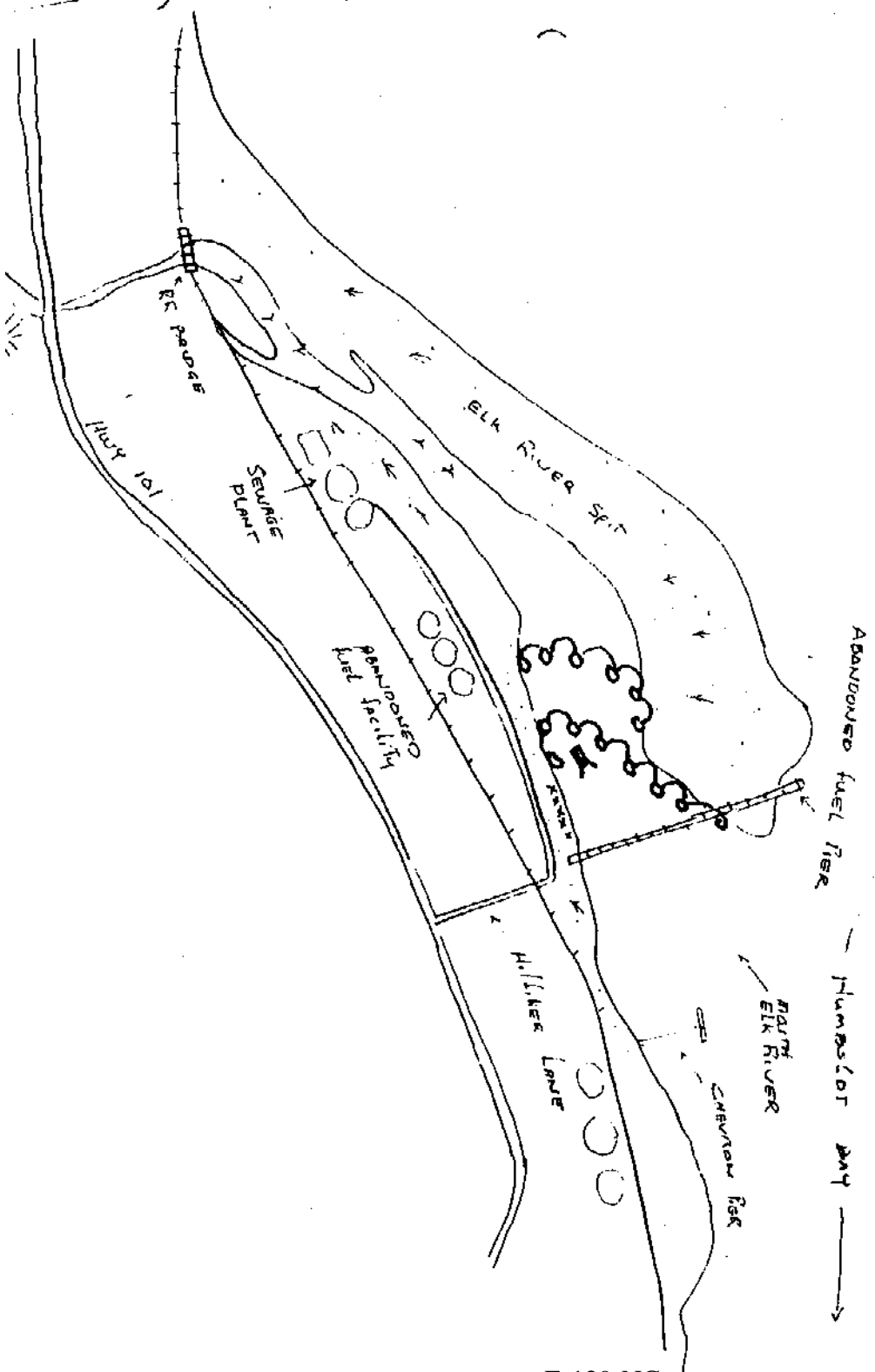
## Salt-Water

## Index

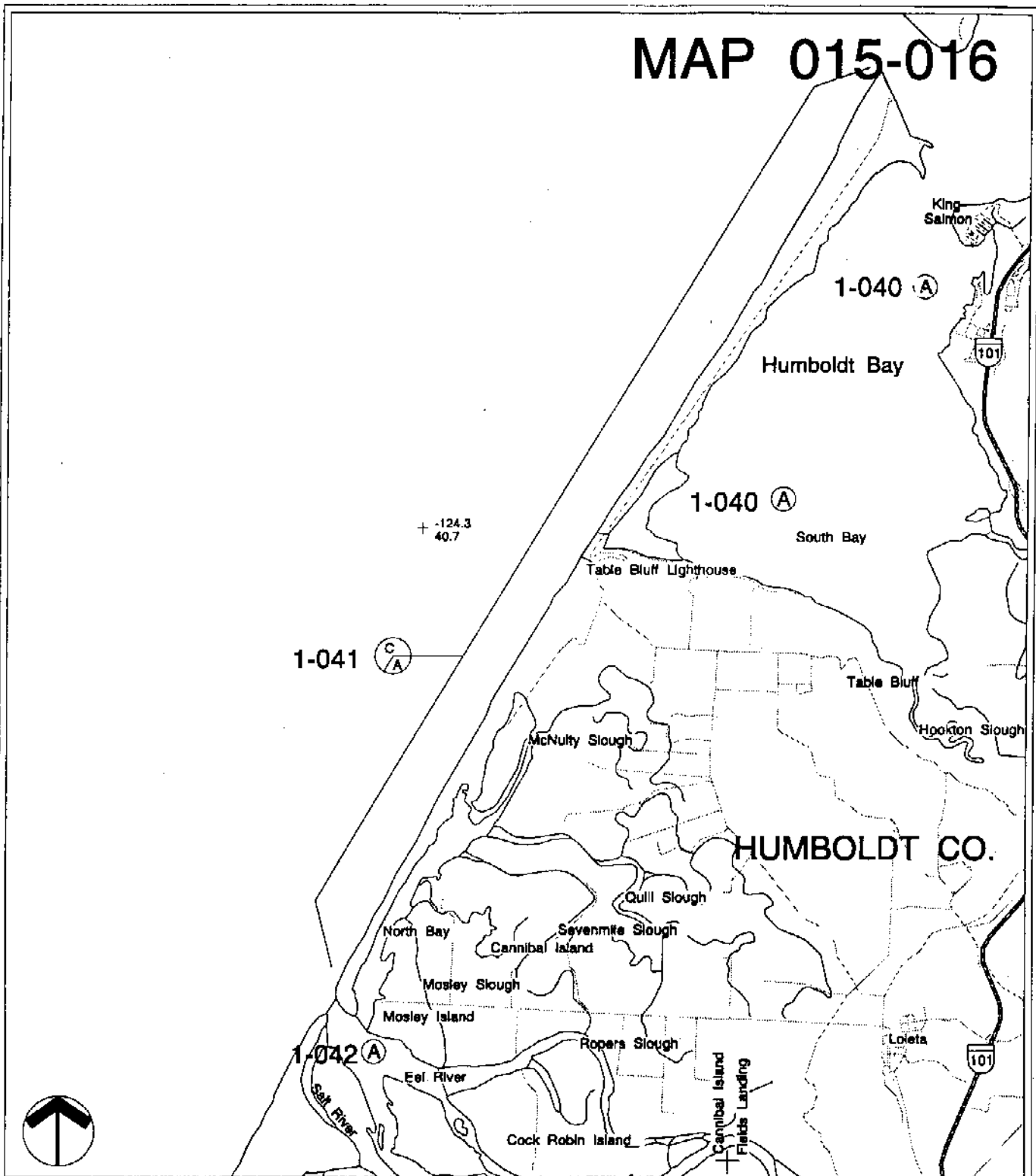
## fresh-water marsh

## High-tide overwash zone

## East high-tide swash line



# MAP 015-016



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY



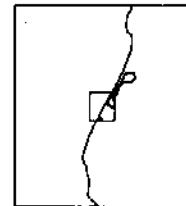
SCALE = 1:61489

0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-130-NC

## INDEX MAP



This map includes USGS quad sheets of Cannibal Island & Fields Landing

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** A-1-040 South Humboldt Bay

**OSPR Map #:** 015-016

**County:** Humboldt

**Lat/Long:** 40 42' 30"/124 15'

**USGS 7.5' Quad. name:** Cannibal Isl, Fields Ldg.

**Rev:** 07/01/96

**NOAA Chart:** 18622

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

- **Access to the shores** of South Humboldt Bay are limited by extensive wetland areas, with the exception of the developed areas around Fields Landing, and King Salmon.

- **East side of South Bay:** Go S. on U.S.Hwy 101 from Eureka to the King Salmon exit (MP 73.046) and go W. on Buhne Drive to King Salmon (town) and the Bay. Go S. on U.S.Hwy 101 from Eureka to the Fields Landing exit (MP 70.844). Take Railroad Avenue to its end at the Bay.

- **West side of South Bay:** Go S. on U.S.Hwy 101 to Hookton Rd overpass (MP 68.116). From stop sign, continue W. (straight ahead) on Hookton Rd. to Table Bluff Road. Continue in same direction. The road will become South Jetty road and run the length of the South jetty.

- **Access by boat:** Two hoist type facilities are available in King Salmon. A launching ramp (end of Railroad Ave.) and travelift (end of Depot Drive) are available at Fields Landing.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Large estuary complex with extensive marshes, eelgrass meadows and sheltered tidal flats exposed at low tide.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds are a concern throughout the year. Coastal seabirds, wading birds, waterfowl. Impt. for Black Brant en route to breeding grounds. Brown Pelican(FE)(04-11), Marbled Murrelet (FT,SE) Raptors incl. Bald Eagle and Peregrine Falcon (FE), Osprey(CSC); all(01-12).

B. Plants: Eelgrass meadows and associated communities Northcoast Bird's Beak (CSC).

C. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal Cutthroat(CSC) trout:

- spawning runs(08-06)

- juveniles/smolts pass through bay

Larval and juvenile fish.

D. Marine Mammals: Haul-outs for molting and pupping located in this area.

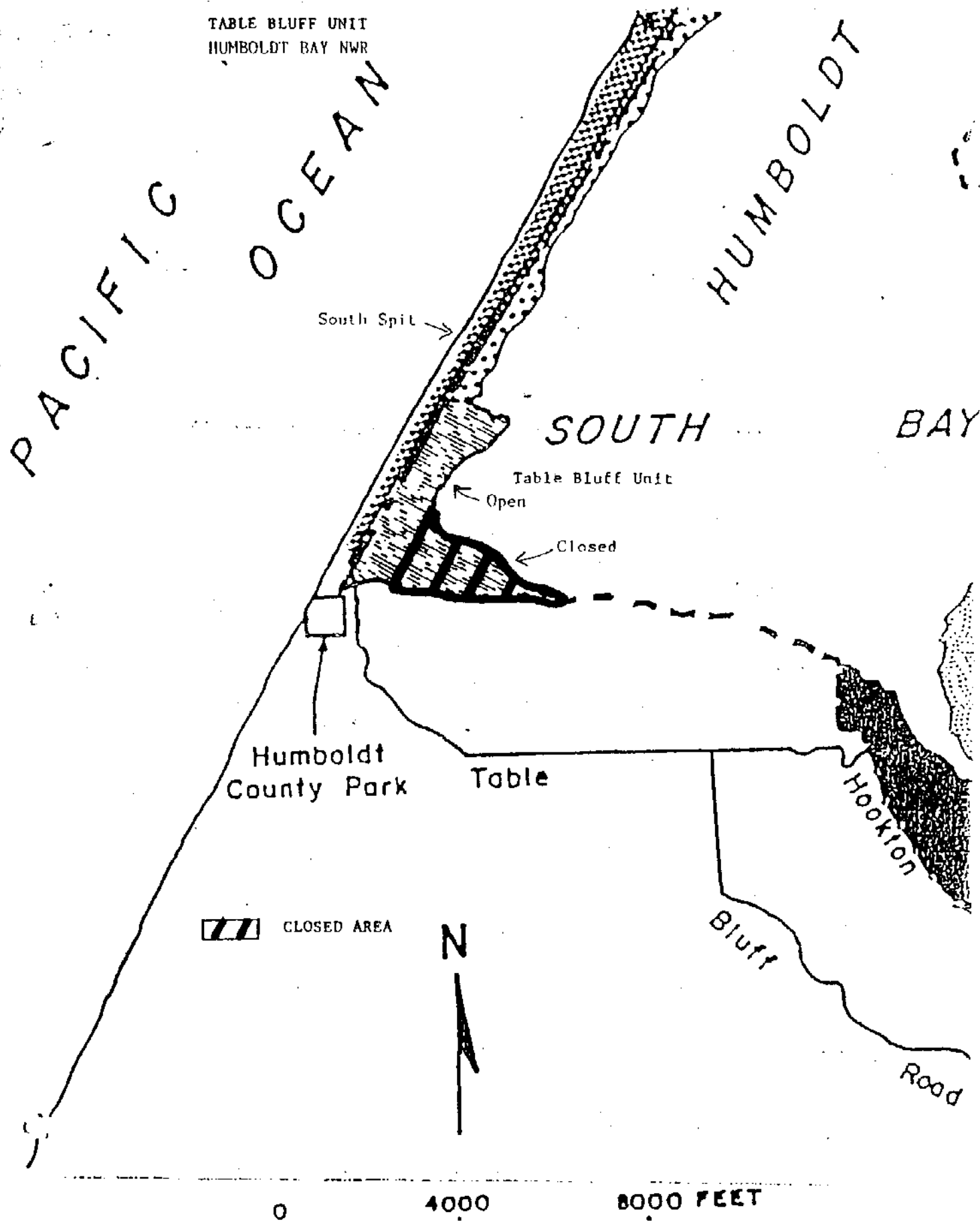
E. Benthic invertebrate communities including bivalves.

**ARCHAEOLOGICAL CONCERNS:** yes

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                                |                |
|------------------------------------------------|----------------|
| Ca. DFG, Wildlife and Marine Resource Div.     | (707) 445-6493 |
| USFWS Humboldt Bay NWR, Refuge Mngr.           | (707) 733-5406 |
| Humboldt Bay Harbor Recreation and Cons Dist.  | (707) 443-0801 |
| Humboldt County Sheriff's Dept. (24 hr.)       | (707) 445-7251 |
| Ca. DFG - OSPR Dispatch (24 hr.)               | (916) 445-0045 |
| National Marine Fisheries Service, Joe Cordaro | (310) 980-4017 |

TABLE BLUFF UNIT  
HUMBOLDT BAY NWR





## SITE SUMMARY SHEET

**SITE:** A-1-041 South Spit

**OSPR Map #:** 015-016

**County:** Humboldt

**USGS 7.5' Quad. name:** Humboldt Fields Ldg

**NOAA Chart:** 18622

**Lat/Long:**

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Go S. on U.S. Hwy 101 to Hookton Rd overpass (MP 68.116). From stop sign, continue W. (straight ahead) on Hookton Rd. to Table Bluff Road. Continue in same direction. The road will become South Jetty Road and run the length of the South Jetty terminating at the entrance channel.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Fine to medium grained sand beach on the ocean side, backed by vegetated dunes.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Brown Pelican(FE)(04-11), Snowy Plover(FT)(01-12) - Critical nesting period (04-07). Nests directly on sand within dunes.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                             |                |
|---------------------------------------------|----------------|
| Ca. DFG Wildlife and Marine Divisions       | (707) 445-6493 |
| USFWS Humboldt Bay NWR, Refuge Mngr.        | (707) 733-5406 |
| Humboldt County Parks Dept.                 | (707) 445-7651 |
| Humboldt County Sheriff's Dept. (24 hr.)    | (707) 445-7251 |
| Ca. DFG - OSPR Dispatch (24 hr.)            | (916) 445-0045 |
| Humboldt Bay Harbor Rec. and Cons. District | (707) 443-0801 |
| Pacific Lumber Company                      | (707) 764-2222 |

## SITE SUMMARY SHEET

**SITE:** A-1-042 Eel River

**OSPR Map #:** 015-016,017

**County:** Humboldt

**Lat:** 40 38'30" N

**USGS 7.5' Quad. name:** Cannibal Isl

**Long:** 124 18'30" W

**NOAA Chart:** 18622, 18620

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go south on U.S. Hwy 101 and take Hookton Road exit MP 68.116. At stop sign turn left on Old Highway (aka Eel River Drive) to Cannibal Island Road at Loleta. Turn right at Cannibal Island Road and continue to Crab Island County Park.

Route to North Jetty(or peninsula): Take Hookton Road exit. At stop sign at Hookton Road do not turn, but continue on Hookton Road (which later becomes Table Bluff Road) until it reaches the beach. 4WD access to the mouth of the river is possible by a road behind the beach dunes (marked), which runs south to the mouth. See 'Hazards' section.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Major estuary complex with abundant marshes, as well as exposed and sheltered tidal flats, numerous sloughs opening into the estuaries. The mouth of the Eel River may migrate seasonally or over a brief period of time from north to south or south to north for a distance of about 1.5 miles.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: shorebirds, seabirds, wading birds, waterfowl (01-12) Cali-  
fornia Brown Pelican (FE)(04-11), Bald Eagle and Peregrine Falcon both(FE), Osprey and Merlin  
both(CSC); all(01-12). Proposed Snowy Plover Critical Habitat - sand dunes on both north and south spits  
of Eel River.(Fed'l) Snowy Plover(FT)(01-12) - Critical nesting period (04-07). Nests directly on sand within  
dunes.

B. Marine Mammals: Pacific Harbor Seals and California Sea Lions haul-outs.

C. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead(FSS) and Coastal  
Cutthroat(CSC) trout:

- spawning runs(08-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG Wildlife, Inland Fish, Marine Res Div  
National Marine Fisheries Service, Joe Cordaro  
Humboldt County Sheriff's Dept. (24 hr.)  
Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-6493  
(310) 980-4017  
(707) 445-7251  
(916) 445-0045

|              |           |         |
|--------------|-----------|---------|
| SITE NAME/NO | EEL RIVER | A-1-042 |
|--------------|-----------|---------|

**North Arrow**

## High-Tide Line

**Low Tide Line**

**Substrate type**

22

**boom skimmer**

XXXXXX

oil

**catchment  
area**

Y  
Salt-water  
marsh

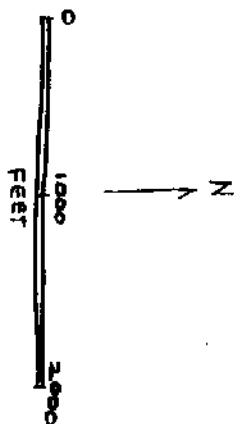
## 2.1.5.2. *Salmonella*

**fresh-water  
marsh**

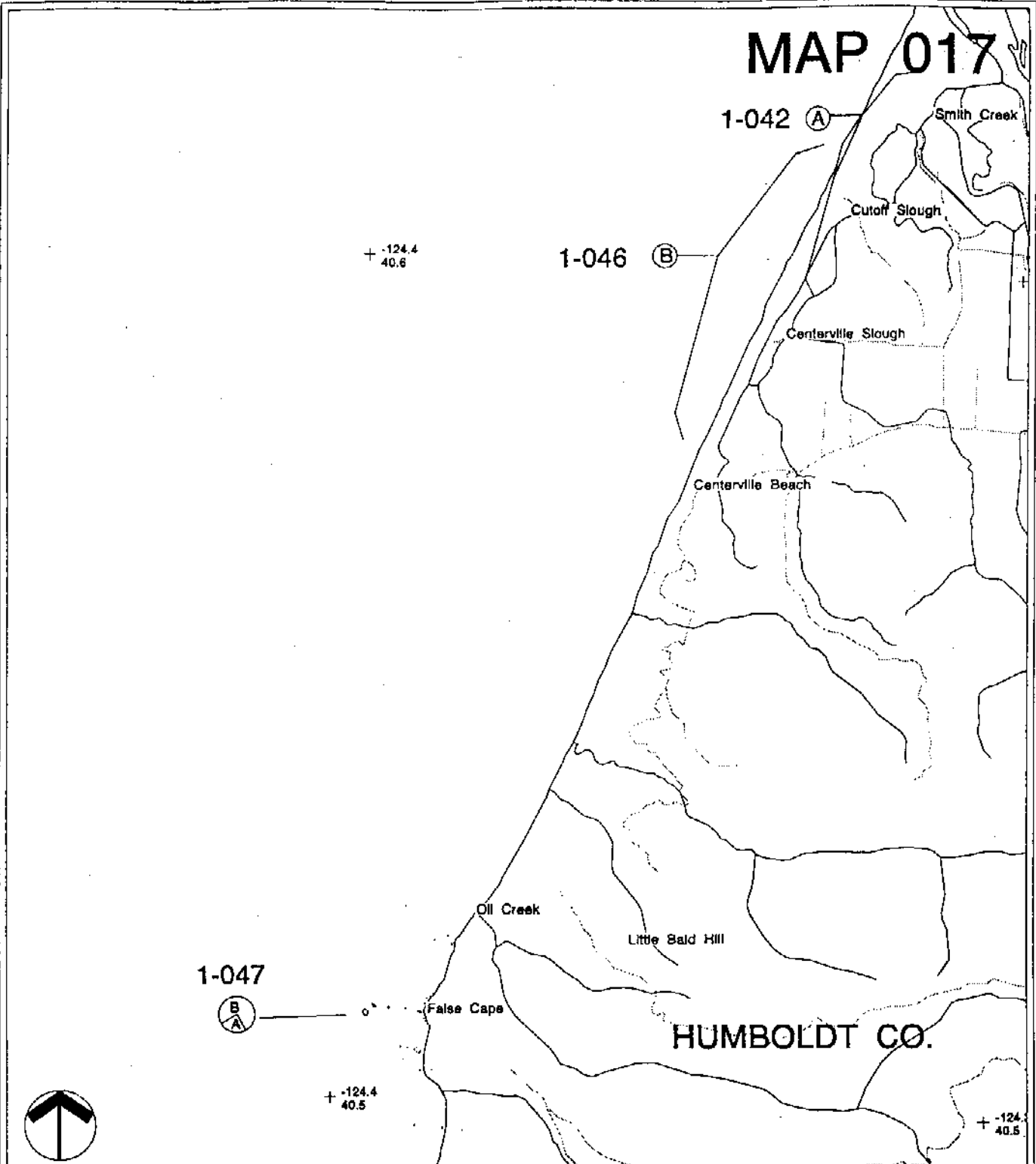
High-tide  
overwash zone

## Last high-tide swash line

Mouth may  
migrate up  
to 1 1/2 miles  
N. or S.



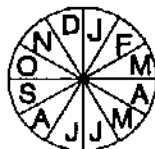
# MAP 017



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

SCALE = 1:61480

0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Ferndale

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** B-1-046 Centerville Beach

**OSPR Map #:** 017

**County:** Humboldt

**USGS 7.5' Quad. name:** Ferndale

**NOAA Chart:** 18620

**Lat:** 40 35'30" N

**Long:** 124 20'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go south on Hwy 101 and take Ferndale/Fernbridge exit. At Fernbridge turn right. This is hwy 211. Follow hwy 211 through Ferndale, then turn right onto Centerville Road. Continue about 2-3 miles to beach. Beach access from this road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Sandy beach

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Snowy Plover(FT)(01-12) - Critical nesting period(04-07). Nests directly on sand within dunes. Beach Layia (SE,FPE)(01-12).

B. Fish: Surfperch spawning(04-06)

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG Wildlife and Marine Res. Div.

(707) 445-6493

Humboldt County Parks

(707) 445-7651

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-047 False Cape Rock

**OSPR Map #:** 017

**County:** Humboldt

**USGS 7.5' Quad. name:** Ferndale

**NOAA Chart:** 18620

**Lat:** 40 30'30" N

**Long:** 124 23'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries: Common Murre appx. 8,000, Brandt's Cormorant appx. 400, Western Gull appx. 220, Pelagic Cormorant appx. 170, Pigeon Guillemot appx. 150. Marine mammal haul out area.

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                                |                |
|------------------------------------------------|----------------|
| Ca. DFG Wildlife and Marine Res. Div.          | (707) 445-6493 |
| Humboldt County Sheriff's Dept. (24 hr.)       | (707) 445-7251 |
| Ca. DFG - OSPR Dispatch (24 hr.)               | (916) 445-0045 |
| National Marine Fisheries Service, Joe Cordaro | (310) 980-4017 |

# MAP 019

1-048 (B)

HUMBOLDT CO.

1-049 (A)

Cape Mendocino  
Sugarloaf Island

Singley Creek

1-050 (B)

Steamboat  
Rock

Durr Creek  
Devils Gate

+ -124.5  
40.4

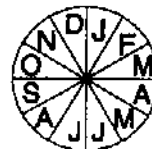
+ -124.4  
40.4



## ENVIRONMENTAL SENSITIVITY RANKING

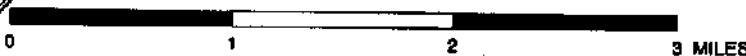
- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



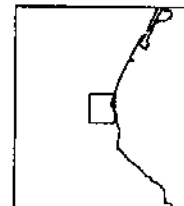
SEASONALITY

SCALE = 1:55332



ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets  
of Cape Mendocino

The comparable NOAA nautical chart  
is Cape Mendocino & Vicinity



## SITE SUMMARY SHEET

**SITE:** B-1-048 Bear River

**OSPR Map #:** 019

**County:** Humboldt

**Lat/Long:** 40 39'/124 23'30"

**USGS 7.5' Quad. name:** Cape Mendocino

**NOAA Chart:** 18623

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, take U.S. 101 S. to Ferndale/Fernbridge exit. Exit and continue on this road. Turn right onto bridge (State route 211). Follow State route 211 through Ferndale and turn left onto Mattole Road (2 lane with earthquake damage reducing road to 1 lane). Follow this road to bridge over Bear River. Foot access from this point.

NOTE: This area is under private ownership. Landowner is uncooperative. Access may not be possible.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal tidal inlet (see RPI Tidal Inlet Study)

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Coastal seabirds, Shorebirds, Waterfowl.

B. Fish: Steelhead(FSS) may be present.

- spawning run(02-05)

- juveniles/smolts(02-05)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Marine Res. Div.

(707) 445-6493

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE NAME:** A-1-049 Cape Mendocino

**OSPR Map #:** 019

**County:** Humboldt

**Lat/Long:** 40 26'30"/124 25'

**USGS 7.5' Quad. name:** Cape Mendocino

**Rev:** 07/01/96

**NOAA Chart:** 18623

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, take U.S. Hwy 101 S. and exit at Ferndale/Fernbridge exit. Continue on this road. Turn right onto bridge (State route 211). Follow State route 211 through Ferndale. Turn left onto Mattole Rd. This road has earthquake damage reducing 2 lane road to 1 lane in spots. Follow Mattole Road to coast. Foot access from Mattole Road. Must obtain access permission from private landowner at Ocean House ranch.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks and open water

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries: Western Gull, Pigeon Guillemot, Black Oystercatcher, Brandt's and Pelagic Cormorants. Tufted Puffin and Double- Crested Cormorant; both(CSC). All above(01-12). Marine Mammals: Steller Sea Lion(FT) pupping area(05-07) >12,000 pups surveyed Pacific Harbor Seals pupping area 03-09 Haul-outs(01-12).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Ca. DFG, Wildlife and Marine Res. Div.

(707) 445-6493

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

Private landowner

## SITE SUMMARY SHEET

**SITE:** A-1-050 Steamboat Rock

**OSPR Map #:** 019

**County:** Humboldt

**USGS 7.5' Quad. name:** Cape Mendocino

**NOAA Chart:** 18623

**Lat/Long:** 40 45'/124 44'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks and open water.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries: Common Murre (4500), Brandt's Cormorant (494)

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_  
\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife Div.

(707) 445-6493

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

# MAP 020-021

1-051 (C)

Capetown  
+  
Petrolia

HUMBOLDT CO.

1-052 (B)

Hair Seal  
Rock

Sea Lion  
Rock

Mattole Point  
Mattole River

+ 124.4  
40.3

1-053 (A)

+ 124.3  
40.3

Mattole Beach

Punta Gorda

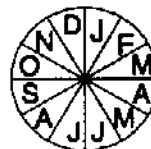
Fourmile Creek



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

SCALE = 1:81864

0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets  
of Capetown & Petrolia

The comparable NOAA nautical chart  
is Cape Mendocino & Vicinity

## SITE SUMMARY SHEET

**SITE:** C-1-051 Capetown

**OSPR Map #:** 020-021

**County:** Humboldt

**USGS 7.5' Quad. name:** Capetown

**NOAA Chart:** 18623

**Lat:** 40 22'30" N

**Long:** 124 22'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, take U.S. Hwy 101 S. and take Ferndale/Fernbridge exit. Continue on this road, turn right onto bridge (State route 211). Follow State route 211 through Ferndale. Turn left onto Mattole Road (earthquake damage - areas are reduced from 2 lanes to 1 lane). This area is just off Mattole Road along coast.

NOTE: Private landowner uncooperative.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal flats occur throughout range of map.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Shorebirds and seabirds present.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG - OSPR Dispatch (24 hr.)

Humboldt County Sheriff's Dept. (24 hr.)

Ca. DFG, Wildlife Division

Bureau of Land Management, Linda Raush

Private landowner

(916) 445-0045

(707) 445-7251

(707) 445-6493

(707) 822-7648

## SITE SUMMARY SHEET

**SITE:** B-1-052 Hair Seal Rock

**OSPR Map #:** 020-021

**County:** Humboldt

**USGS 7.5' Quad. name:** Petrolia

**NOAA Chart:** 18623

**Lat/Long:** 40 20'/124 21'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries: Brandt's and Pelagic Cormorants

B. Marine Mammals: Pacific Harbor Seal haul-out area  
- 350 observed in area.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Wildlife and Marine Res. Div.

National Marine Fisheries Service, Joe Cordaro

Humboldt County Sheriff's Dept. (24 hr.)

Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-6493

(310) 980-4017

(707) 445-7251

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-053 **Mattole River**

**OSPR Map #:** 020-021

**County:** Humboldt

**USGS 7.5' Quad. name:** Petrolia

**NOAA Chart:** 18623

**Lat/Long:** 40 17'30"/124 21'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go south U.S. Hwy 101. Exit U.S. hwy 101 at Ferndale Fernbridge exit. At Fernbridge, turn right onto bridge. This is state hwy 211. Follow hwy 211 through Ferndale. Turn left onto Mattole Road. This is a 2-lane road with earthquake damage reducing some areas to 1 lane. Follow Mattole Road through Petrolia. Turn right onto Lighthouse Road. This road parallels the river to the mouth.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Complex tidal estuary.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: shorebirds, seabirds, waterfowl California Brown Pelican (FE,SE)(04-11), Bald Eagle and Peregrine Falcon both(FE,SE)(01-12)

B. Fish: Anadromous salmonids: Coho(FPT) and Chinook(CSC) salmon, Steelhead trout(FSS).

- spawning runs(08-06)

- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bureau of Land Management, Linda Raush

Ca. DFG, Wildlife and Inland Fish Div.

Humboldt County Sheriff's Dept. (24 hr.)

Ca. DFG - OSPR Dispatch (24 hr.)

(707) 822-7648

(707) 445-6493

(707) 445-7251

(916) 445-0045

# INLET SKETCH MAP

MATTOLE RIVER

Inlet Name INLET, C.R.

Recorder(s) Molt

Observed Currents

Date/Time 092245H - 07.1992

Tide Stage -

Inlet Classification B

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide line
- ☒ Low-Tide line
- ☒ Substrate Type

## LEGEND

XXXXXXX

Recommended  
Oil-Catchment Area

✓

Salt-Water Marsh

8

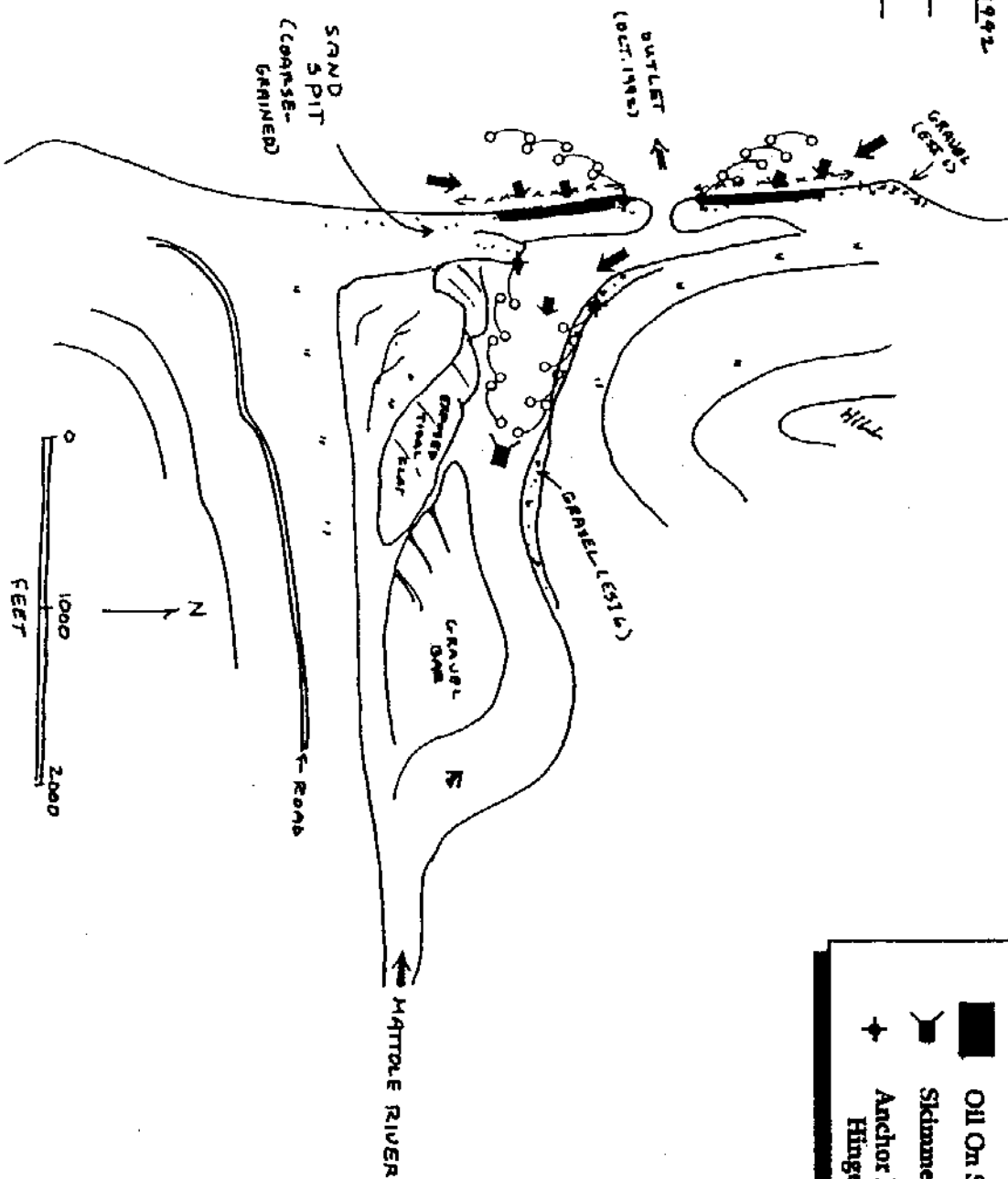
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



## POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- ⌋ Skimmer Placement
- ✚ Anchor Point / Hinge Line



# MAP 022-023

1-054 (B)

## HUMBOLDT CO.

1-055 (C)



+ 124.3  
40.1

Cooskie Creek  
Shubrick Peak

+ 124.2  
40.1

### ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

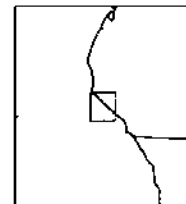
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0 1 2 3 4 MILES

ALBERS PROJECTION, NORTH AMERICAN DATUM OF 1927

E-V-112 Change #1

### INDEX MAP



This map includes USGS quad sheets of Cooskie Creek & Shubrick Peak

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** B-1-054 Cooskie Creek

**OSPR Map #:** 022-023

**County:** Humboldt

**USGS 7.5' Quad. name:** Cooskie Creek

**NOAA Chart:** 18623

**Lat/Long:** 40 12'30"/124 18'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

No access.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Wave-cut platforms and mixed sand and gravel beaches.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Fish: Steelhead trout(FSS) - spawning period(10-03) and juveniles/smolts(02-05).

B. Marine Mammals: Pacific Harbor Seal Haul-outs(01-12)

C. Seabirds and Shorebirds present.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG - OSPR Dispatch (24 hr.)

Humboldt County Sheriff's Dept. (24 hr.)

Ca. DFG, Wildlife Division

Bureau of Land Management, Linda Raush

(916) 445-0045

(707) 445-7251

(707) 445-6493

(707) 822-7648

## SITE SUMMARY SHEET-OPA90

**SITE:** C-1-055 Shubrick Peak

**OSPR Map #:** 022-023

**County:** Humboldt

**Lat/Long:** 40 10'/124 12'

**USGS 7.5' Quad. name:** Shubrick Peak

**Rev:** 07/01/96

**NOAA Chart:** 18623

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Access via jeep trail through BLM and private lands may be possible. Private landing strip at Big Flat.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal flat and wave-cut platform.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabirds present.

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-7251

Ca. DFG, Wildlife Division

(707) 445-6493

Bureau of Land Management, Linda Raush

(707) 822-7648

## SITE SUMMARY SHEET

**SITE:** B-1-056 Shelter Cove and Cormorant Hotel

**OSPR Map #:** 025-026

**County:** Humboldt

**Lat/Long:** 40 02'/124 05'

**USGS 7.5' Quad. name:** Shelter Cove

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From Eureka, go south on U.S. Hwy 101. Take the Redway exit MP 11.653. Follow this road to Redway. Turn right onto Shelter Cove-Briceland Rd. Continue on this road to Whitethorn Junction (lg fork in the rd). Do not turn. Continue on Shelter Cove Road into Shelter Cove. Follow the city road paralleling the coast-line.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky headlands.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookery: Pelagic Cormorant (as many as 280 observed)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Humboldt County Sheriff's Dept. (24 hr.)

(707) 445-0045

Ca. DFG, Wildlife Division

(707) 445-6493

Bureau of Land Management, Linda Raush

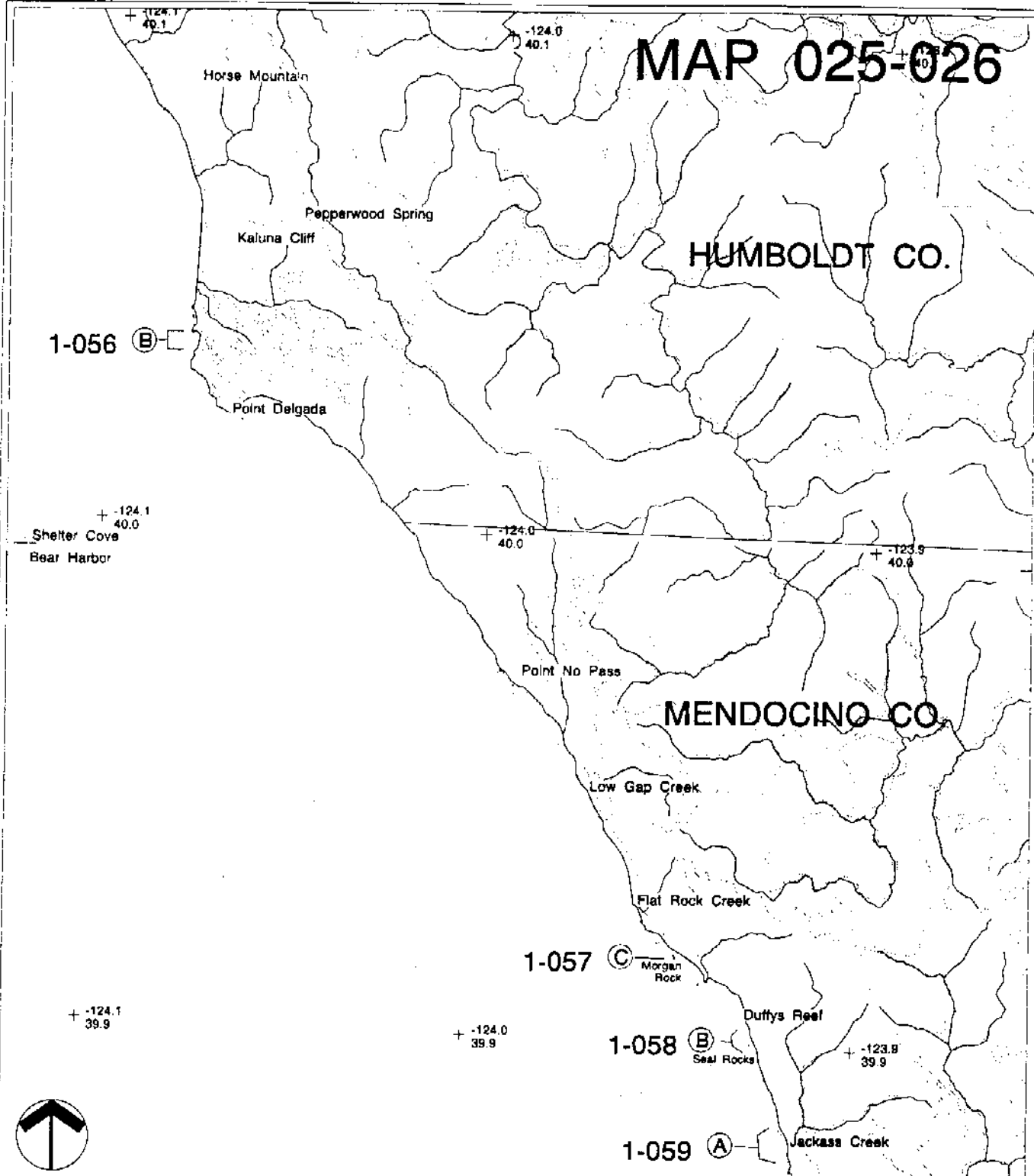
(707) 822-7648

# Annex E: Environmentally Sensitive Sites

## Mendocino County

<b>SITE: B-1-057 Morgan Rock .....</b>	<b>156</b>
<b>SITE: B-1-058 Seal Rocks .....</b>	<b>157</b>
<b>SITE: A-1-059 Jackass Creek .....</b>	<b>158</b>
<b>SITE: B-1-060 Little Jackass Creek .....</b>	<b>160</b>
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<b>SITE: A-1-062 Shoreline Rock .....</b>	<b>162</b>
<b>SITE: A-1-063 Soldier Frank Point .....</b>	<b>163</b>
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<b>SITE: A-1-065 Hardy Creek .....</b>	<b>167</b>
<b>SITE: A-1-066 Union Landing .....</b>	<b>169</b>
<b>SITE: A-1-067 Westport .....</b>	<b>170</b>
<b>SITE: A-1-068 Kibesillah Hill .....</b>	<b>173</b>
<b>SITE: A-1-069 Ten Mile River .....</b>	<b>174</b>
<b>SITE: B-1-070 Inglenook Creek and Sandhill Lake Creek .....</b>	<b>176</b>
<b>SITE: B-1-071 McKerricher St Pk-Mill Crk .....</b>	<b>177</b>
<b>SITE: B-1-072 McKerricher St Pk-Laguna Pt. ....</b>	<b>180</b>
<b>SITE: B-1-073 Virgin Creek .....</b>	<b>181</b>
<b>SITE: B-1-074 Pudding Creek.....</b>	<b>182</b>
<b>SITE: A-1-075 Soldier Point .....</b>	<b>184</b>
<b>SITE: A-1-076 Noyo Harbor Entrance and Dolphin Cove .....</b>	<b>185</b>
<b>SITE: B-1-077 South Fort Bragg .....</b>	<b>189</b>
<b>SITE: B-1-078 Caspar Point .....</b>	<b>193</b>
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<b>SITE: A-1-080 Pt Cabrillo to Russian Gulch .....</b>	<b>196</b>
<b>SITE: B-1-081 Mendocino Headlands St. Pk. ....</b>	<b>199</b>
<b>SITE: A-1-082 Big River .....</b>	<b>200</b>
<b>SITE: B-1-083 Mendocino Bay .....</b>	<b>202</b>
<b>SITE: A-1-084 Van Damme State Park and Little River .....</b>	<b>203</b>
<b>SITE: B-1-085 Dark Gulch .....</b>	<b>206</b>
<b>SITE: A-1-086 Albion River .....</b>	<b>207</b>
<b>SITE: A-1-087 Salmon Point and Big Salmon Creek .....</b>	<b>209</b>
<b>SITE: A-1-088 Navarro River St Pk .....</b>	<b>211</b>
<b>SITE: A-1-089 Greenwood Creek to Cuffey's Cove .....</b>	<b>213</b>
<b>SITE: B-1-090 Bonee Gulch .....</b>	<b>216</b>
<b>SITE: A-1-091 Elk Creek .....</b>	<b>217</b>
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<b>SITE: B-1-093 Alder Creek .....</b>	<b>220</b>
<b>SITE: B-1-094 Point Arena .....</b>	<b>223</b>
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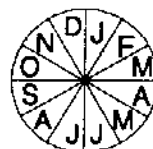
# MAP 025-026



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

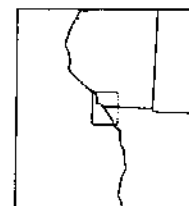
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0 1 2 3 4 5 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-155-NC

## INDEX MAP



This map includes USGS quad sheets of Shelter Cove & Bear Harbor

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET-OPA90

**SITE:** B-1-057 Morgan Rock

**OSPR Map #:** 025-026

**County:** Mendocino

**Lat/Long:** 39 55'/123 55'30"

**USGS 7.5' Quad. name:** Bear Harbor

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Inaccessible from land. Near Bear Harbor, about 10 miles S.of Pt. Delgada. Nearest road is Bear Harbor Road off Usal Road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rock. Lies about 500 feet offshore

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Pacific Harbor seal haul-out areas(01-12).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca DFG, Fort Bragg Office	(707) 964-9078
National Marine Fisheries Service, Joe Cordaro	(310) 980-4017
Ca State Parks, Northcoast Redwood dist Hq	(707) 445-6547
Sinkyone Wilderness St. Park	(707) 986-7711
Sinkyone Intertribal Wilderness Council	(707) 485-8744
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086
Ca. DFG - OSPR Dispatch (24 hr.)	(707) 445-0045

## SITE SUMMARY SHEET

**SITE:** B-1-058 Seal Rocks

**OSPR Map #:** 025-026

**County:** Mendocino

**USGS 7.5' Quad. name:** Bear Harbor

**NOAA Chart:** 18620

**Lat/Long:** 39 54'/123 55'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Inaccessible from land

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Pacific Harbor Seal haul-out areas(01-12)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca DFG, Fort Bragg Office

(707) 964-9078

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

Ca State Parks, Northcoast Redwood dist Hq

(707) 445-6547

Sinkyone Wilderness St. Park

(707) 986-7711

Sinkyone Intertribal Wilderness Council

(707) 485-8744

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca. DFG - OSPR Dispatch (24 hr.)

(707) 445-0045



# SITE SUMMARY SHEET

**SITE:** A-1-059 Jackass Creek

**OSPR Map #:** 025-026

**County:** Mendocino

**Lat/Long:** 39 53'/123 55'

**USGS 7.5' Quad. name:** Bear Harbor

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to state route 1 at Legget. Go S. on st route 1 to MP 90.91. Take Usal Rd N (4wd may be required at times) 8 - 10 miles (Name of Usal Rd changes to Timber Ridge Road). Access to Jackass Creek is limited and seasonal through some private lands. Maintenance of roads to Jackass Creek will cease since this will become a 'wilderness' state park. Contact Sinkyone Wilderness St Park listed below.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet. Inlet consists of coarse-grained sand and granules. See RPI Tidal Inlet Study.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Leafy Reed Grass (R)(01-12) near creek. Peregrine Falcon (FE,SE)(01-12) found in area. Shorebirds and seabirds abundant in area.

B. Pacific Harbor Seal abundant in area.

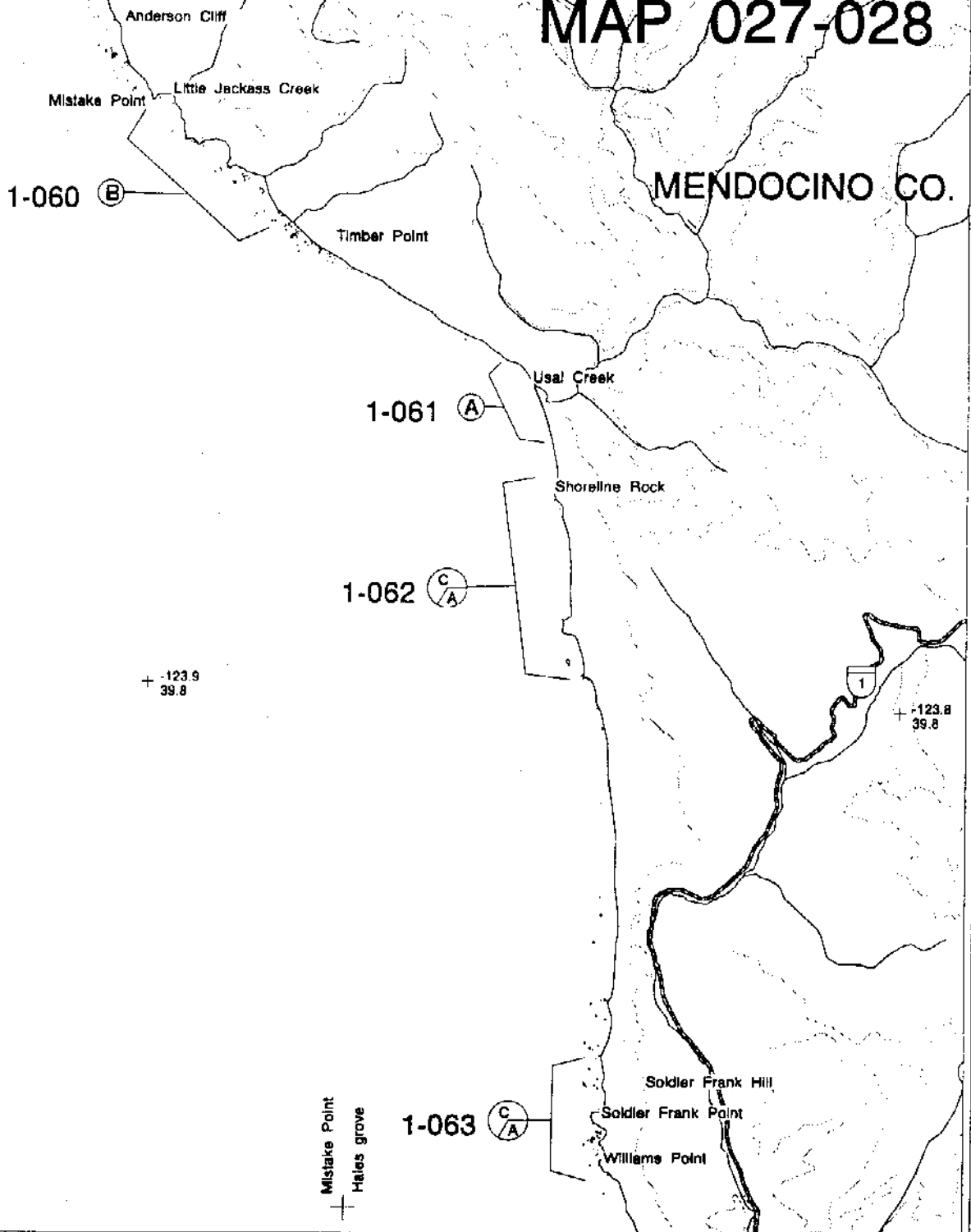
**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg Office,	(707) 964-9078
National Marine Fisheries Service, Joe Cordaro	(310) 980-4017
Ca State Parks, Northcoast Redwood dist Hq	(707) 445-6547
Sinkyone Wilderness St. Park	(707) 986-7711
Sinkyone Intertribal Wilderness Council	(707) 485-8744
Mendocino County Sheriff Dept. (24 hr.)	(707) 463-4086
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045

# MAP 027-028

## MENDOCINO CO.

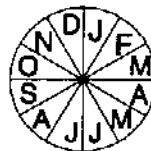


### ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

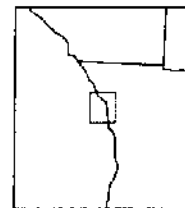
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0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-159-NC

### INDEX MAP



This map includes USGS quad sheets of Mistake Point & Hales Grove

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** B-1-060 Little Jackass Creek

**OSPR Map #:** 027-028

**County:** Mendocino

**Lat/Long:** 39 51\123 54'

**USGS 7.5' Quad. name:** Mistake Pt.

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Accessible only from Jackass Creek (A-1-059) VIA difficult 3.5 mile foot trail through steep terrain. Site lies within Sinkyone Wilderness State Park.

Take U.S. Hwy 101 N. to state route 1 at Legget. Go S. on st route 1 to MP 90.91. Take Usal rd N (4wd may be required at times) 8 - 10 miles (Name of Usal Rd changes to Timber Ridge Road). Access to Jackass Creek is limited and seasonal through some private lands. Maintenance of roads to Jackass Creek will cease since this will become a 'wilderness' state park. Contact Sinkyone Wilderness St Park listed below.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Small tidal inlet. Beach sediments range from coarse-grained sand to gravel.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. California sea Lion haulout (largest mainland haulout in California)(5 - 8). Pacific Harbor Seal haul-out 900+ animals observed.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Mendocino County Sheriff's Dept. (24 hr.)  
Ca. DFG - OSPR Dispatch (24 hr.)  
Ca DFG, Fort Bragg Office,  
National Marine Fisheries Service, Joe Cordaro  
Ca State Parks, Northcoast Redwood dist Hq  
Sinkyone Wilderness St. Park  
Sinkyone Intertribal Wilderness Council

(707) 463-4086  
(916) 445-0045  
(707) 964-9078  
(310) 980-4017  
(707) 445-6547  
(707) 986-7711  
(707) 485-8744

## SITE SUMMARY SHEET

**SITE:** A-1-061 Usal Creek

**OSPR Map #:** 027-028

**County:** Mendocino

**USGS 7.5' Quad. name:** Hales Grove

**NOAA Chart:** 18620

**Lat/Long:** 39 49'30"/123 51'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to state route 1 at Leggett. Go S. on st route 1 to MP 90.91. Take Usal rd N (narrow, winding, and unpaved - 4wd may be required at times) 8 - 10 miles. Contact Sinkyone Wilderness St Park listed below. Site lies within Sinkyone Wilderness State Park.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

See RPI Tidal Inlet Study. Tidal inlet and estuary. Beach consists of coarse sediments (coarse grained sand, granules, and pebbles).

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Oiling of estuary is the primary concern. A concern throughout the year.

B. Tidewater Goby (FE)(01-12). Seabirds, shorebirds, and raptors are commonly in the area. Pacific Harbor Seals are commonly in the area.

C. Night smelt and Surf smelt spawn on the beach near the entrance to Usal Creek and south to Shoreline Rock from (04-08).Surfperch spawn in area.

**ARCHAEOLOGICAL CONCERNS:** Yes.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca DFG, Fort Bragg Office	(707) 964-9078
National Marine Fisheries Service, Joe Cordaro	(310) 980-4017
Ca State Parks, Northcoast Redwood dist Hq	(707) 445-6547
Sinkyone Wilderness St. Park	(707) 986-7711
Sinkyone Intertribal Wilderness Council	(707) 485-8744
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086
Ca. DFG - OSPR Dispatch (24 hr.)	(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-062 Shoreline Rock

**OSPR Map #:** 027-028

**County:** Mendocino

**USGS 7.5' Quad. name:** Hales Grove

**NOAA Chart:** 18620

**Lat/Long:** 39 49'/123 51'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to state route 1 at Leggett. Go S. on st route 1 to MP 90.91. Take Usal rd N (narrow, winding, and unpaved - 4wd may be required at times) 8 - 10 miles. Shoreline Rock is offshore about .25 miles S. of the mouth of Usal Creek. Contact Sinkyone Wilderness St Park listed below. Site lies within Sinkyone Wilderness State Park.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Nearshore rock. Closest beaches are of coarse sediments.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(05-09): Pelagic Cormorant, Pigeon Guillemot, Western Gull

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca DFG, Fort Bragg Office	(707) 964-9078
Ca State Parks, Northcoast Redwood dist Hq	(707) 445-6547
Sinkyone Wilderness St. Park	(707) 986-7711
Sinkyone Intertribal Wilderness Council	(707) 485-8744
Wilderness Institute (lease property from	
Stoper-Wheeler, Inc. for private hunt club)	(800) 415-hunt
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086

## SITE SUMMARY SHEET

**SITE:** A-1-063 Soldier Frank Point

**OSPR Map #:** 027-028

**County:** Mendocino

**USGS 7.5' Quad. name:** Hales Grove

**NOAA Chart:** 18620

**Lat/Long:** 39 45' 30"/123 50'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Inaccessible rocky headland lying about 2 mi. N. of Cape Vizcaino. Nearest road is Usal Road. Take U.S. Hwy 1 N. to State Hwy 1 at eggett. Go S. on State Hwy 1 to MP 83.54. Go N. on dirt road (4WD required at times).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Exposed rock cliffs; exposed vertical sea walls.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Pelagic Cormorant, Pigeon

Guillemot

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg Office

(707) 964-9078

Ca. DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

# MAP 029

## MENDOCINO CO.

1-064

(A)

Rockport Bay  
Cottanava Creek  
Gape Vizcalno

1-065

(A)

Hardy  
Hardy Creek

Juan Creek

123.8  
39.7

Union Landing

Little Juan Creek

Little Howard Creek

Howard Creek

1-066

(A)

Gordon Hill  
Abalone Point

DeHaven Creek

Wages Creek

1-067

(A)

Westport

Bell Point



### ENVIRONMENTAL SENSITIVITY RANKING

(A)

- First Priority

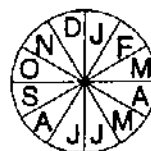
(B)

- Second Priority

(C)

- Third Priority

Last Update July, 1993



SEASONALITY

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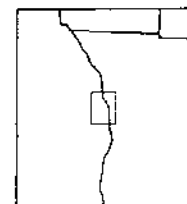


0 1 2 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927



### INDEX MAP



This map includes USGS quad sheets of Westport

The comparable NOAA nautical chart - Is Point Arena to Trinidad Head

E-164-NC

## SITE SUMMARY SHEET

**SITE:** A-1-064 Rockport Bay and Cottaneva Creek

**OSPR Map #:** 029

**County:** Mendocino

**Lat/Long:** 39 50'/123 49'30"

**USGS 7.5' Quad. name:** Westport

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to State route 1 South at Leggett. Go south on State route 1. Exit at Louisiana Pacific Private Road in Rockport MP 87.82. Site is through a locked gate and appx. 0.6 miles down 1 lane dirt road. Follow road to left to grassy field (100 yds. by 150 yds.). This area is accessible to large equipment.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Mixed sand and gravel beach. Minor wetland.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. California Brown Pelicans (FE,SE)(04-11) Seabirds Shorebirds waterfowl minor freshwater marsh.

B. Surf smelt and Night smelt spawning area(04-08).

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Lousiana Pacific Corporation

(707) 964-4781

Ca. Dept. Fish and Game, Fort Bragg office

(707) 978-5603

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



**COTTAGE CREEK**

**INLET, CA.**

MOH/THU

12 NOV. 1992; 1045

JOYCE  
HIGH @ 1116 (+6.4);  
FUELED

Section 7

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

[illegible]

- ### Recommended Oil-Catchment Area

天

### Salt-Water Marsh



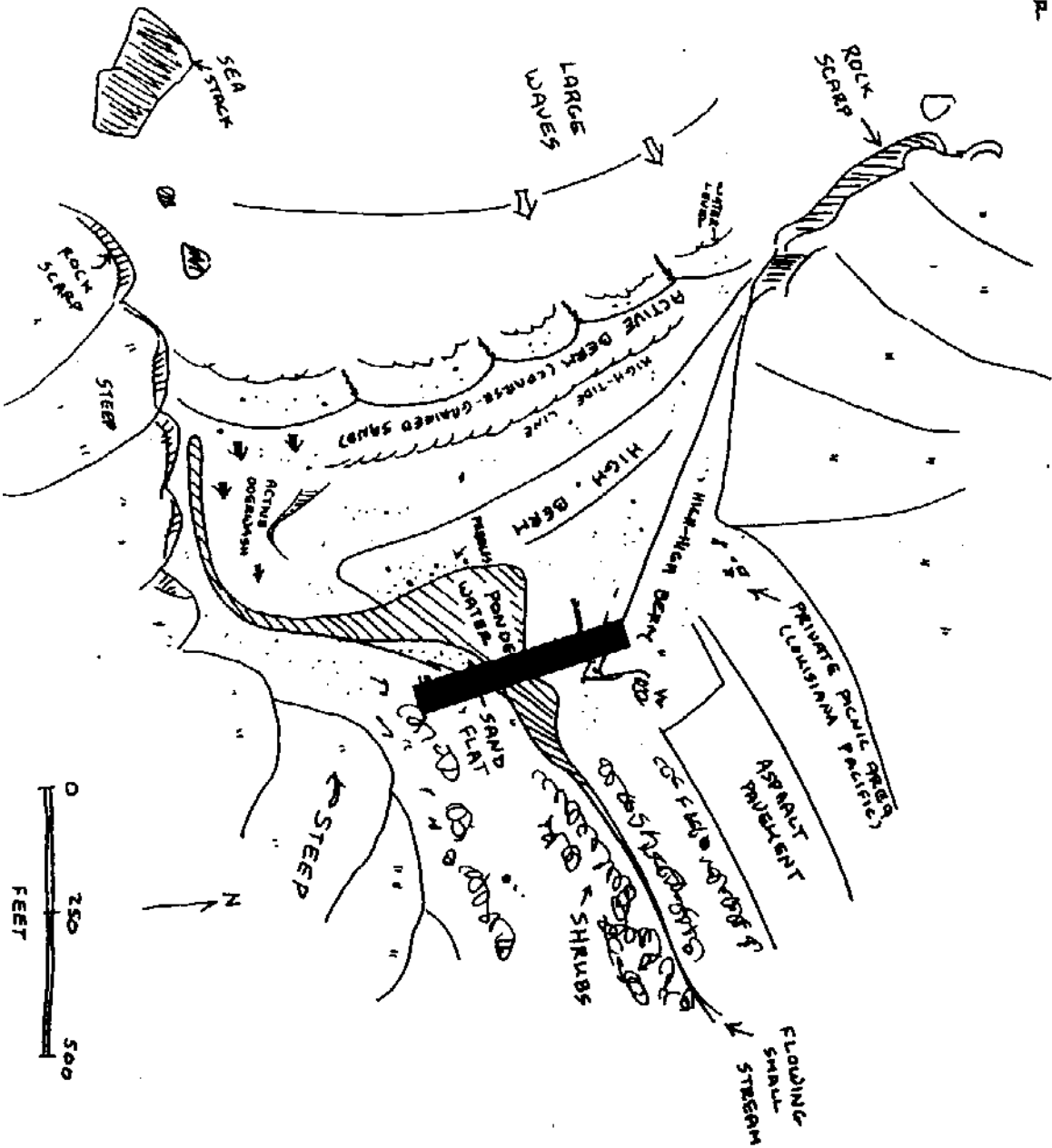
### Fresh-Water Marsh



High-Tide  
Overwash Zone



## Last High-Tide Swash line



## POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

### Sediment Diike

## SITE SUMMARY SHEET

**SITE:** A-1-065 Hardy Creek

**OSPR Map #:** 029

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18620

**Lat:** 39 42'30" N

**Long:** 123 48'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to State route 1 South at Leggett. Follow state route 1 S. to Private Road at MP 83.78. Follow this access road until it terminates at the head of the marsh/wetland. Road ends here, it does not access the beach. Proceed by foot. Beach access also possible by steep foot path from State Hwy 1 MP 83.53.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Small stream incises a sand and gravel beach and abuts a bedrock bluff on the northside of valley. The narrow beach has a well developed storm berm. During severe storm conditions, the entire beach is apparently overwashed, as evidenced by the presence of large logs up in the marsh on the south side of valley. This inlet can be closed by a sediment dike.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Shorebirds and waterfowl visiting ponded water and marsh behind the beach. Marsh system behind the beach.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept of Fish and Game, Fort Bragg  
Yountville

(707) 944-5500

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

HARDY CREEK

Inlet Name INLET, CA.

Recorder(s) MDH/THH

Date/Time 12/20/1992: 0950

Tide Stage High @ 1116 (+6.5) 4106N

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

—XXXXXXXX—

Recommended  
Oil-Catchment Area

X X

Salt-Water Marsh

§

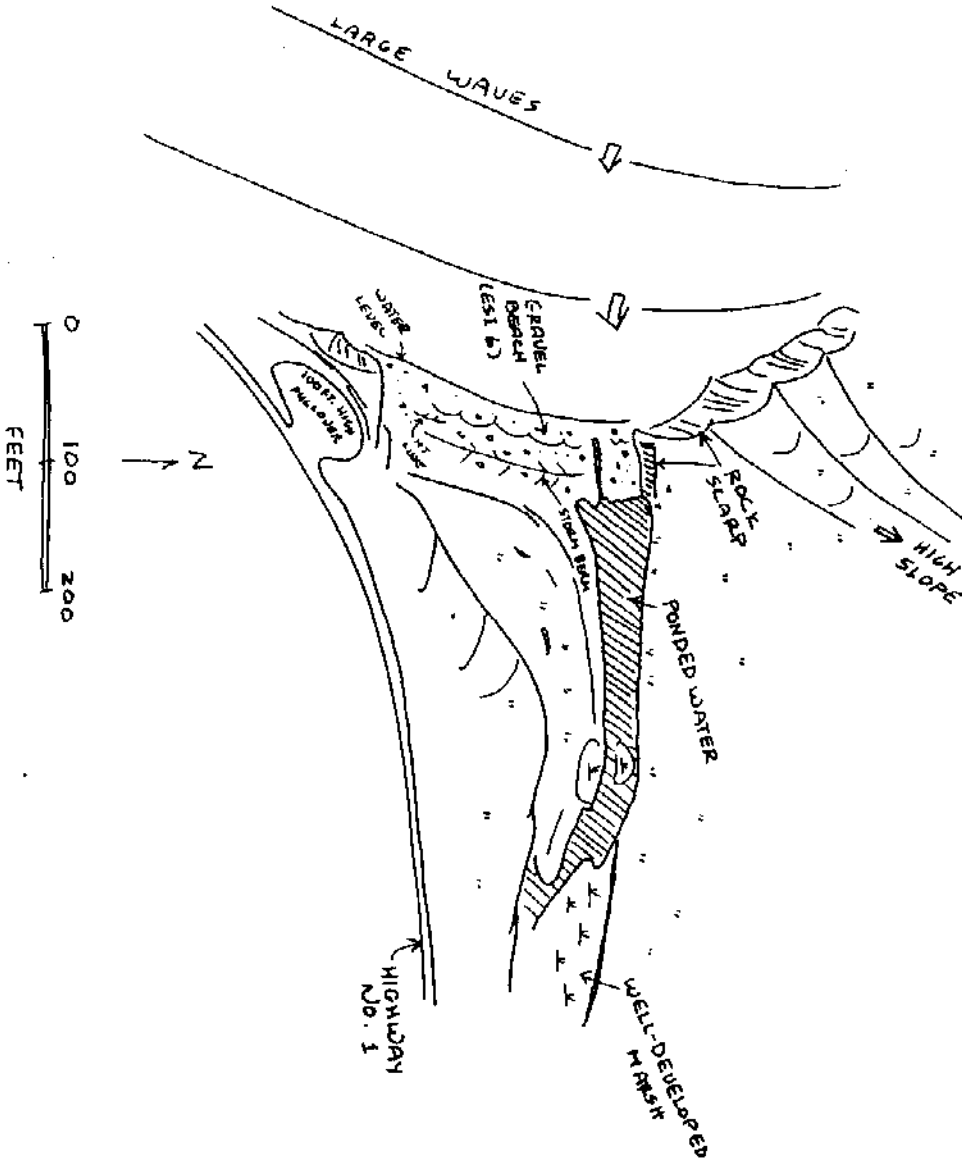
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



## SITE SUMMARY SHEET

**SITE:** A-1-066 Union Landing

**OSPR Map #:** 029

**County:** Mendocino

**Lat/Long:** 39 41' 30"/123 48'

**USGS 7.5' Quad. name:** Westport

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Leggett. Turn S. on state Hwy 1 and continue to about MP 80. Four small coastal streams excise steep coastal bluffs and beaches in this area. Juan Creek - private road 0.1 miles N. of Juan Creek bridge at MP 82.91. Howard Creek - go west at MP 80.81 to State Park parking lot. Paved Rd. is adjacent to creek. Dehaven Creek - go west at MP 79.30 on paved road. Use dirt road at end of Dehaven creek bridge for large machinery. Wages Creek - enter Wages Creek private campground. Access to beach is 0.4 miles beyond campground managers home. Get permission.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks, steep coastal bluffs, and small coastal stream inlets. The tidal inlets generally do not have ponded water behind them and do not have near shore wetlands associated with them. The tidal inlets include Juan Creek, Howard Creek, Dehaven Creek and Wages Creek.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): primarily Pelagic Cormorants roosts(01-12). The tidal inlets are visited by migrating shorebirds and waterfowl. Tidewater Goby(FE)(01-12) may be found in coastal streams.

B. Surf smelt and Night smelt spawn near the mouths of the four creeks from(05-08).

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept of Fish and Game, Fort Bragg

(707) 964-9078

Yountville

(707) 944-5500

Ca St. Pks, Russian Gulch/Mendocino HQ

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-067 Westport

**OSPR Map #:** 029

**County:** Mendocino

**Lat/Long:** 39 38'/123 47'

**USGS 7.5' Quad. name:** Mendocino

**Rev:** 07/01/96

**NOAA Chart:** 18620

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on state Hwy 1 and continue to Westport.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Offshore rocks and steep coastal bluffs.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): principally Pelagic Cormorants, roosts(01-12).

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_  
\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept of Fish and Game, Fort Bragg

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

WAVES CREEK  
Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 12 NOV 1972, 0930

Tide Stage HIGH (116 (+6.4) MSL)

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

xxxxxxx

Recommended  
Oil-Catchment Area

✓ ✓

Salt-Water Marsh



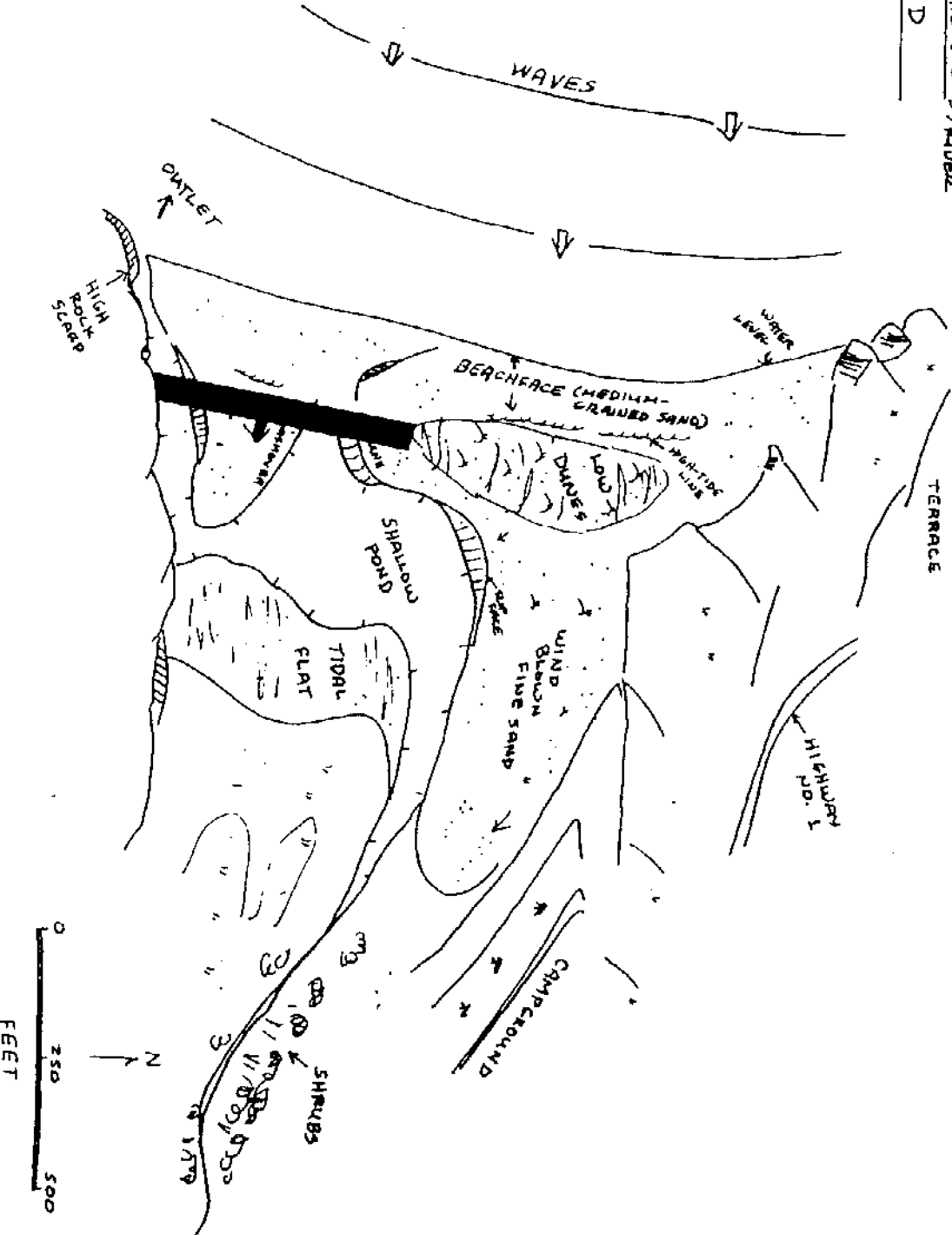
Fresh-Water Marsh



High-Tide  
Overwash Zone



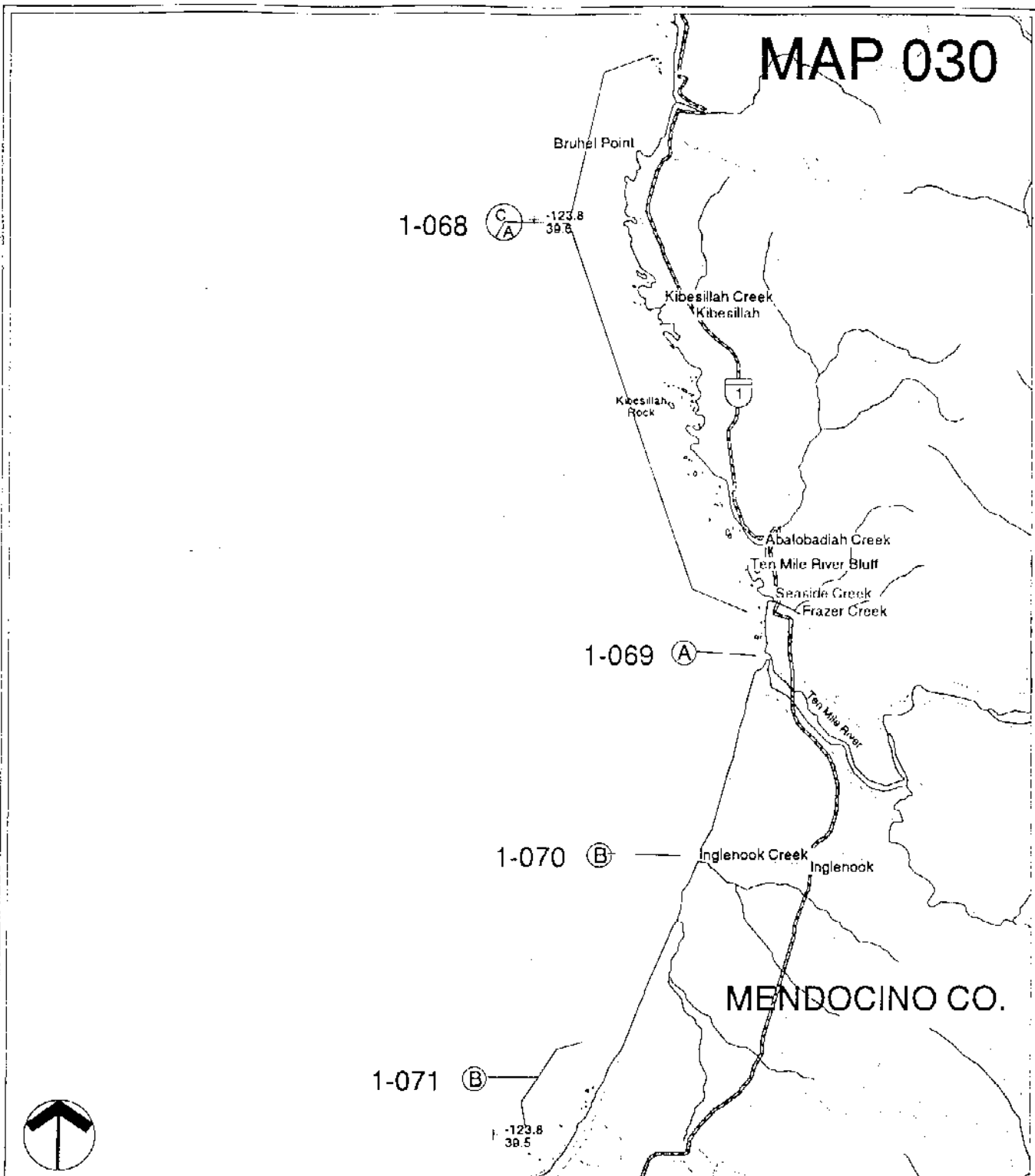
Last High-Tide  
Swash Line



POTENTIAL PROTECTION  
STRATEGY (FLOOD TIDE)

Sediment DiKE

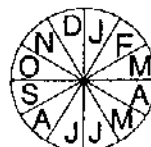
# MAP 030



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

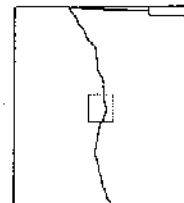
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0 1 2 3 MILES

ALBERS PROJECTION NORTH AMERICAN DATUM OF 1927

E-V-141 Change #1

## INDEX MAP



This map includes USGS quad sheets of Inglenook

The comparable NOAA nautical chart is Point Arena to Trinidad Head

## SITE SUMMARY SHEET

**SITE:** A-1-068 Kibesillah Hill

**OSPR Map #:** 030

**County:** Mendocino

**USGS 7.5' Quad. name:** Inglenook

**NOAA Chart:** 18620

**Lat/Long:** 39 35'30"/123 47'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on State Hwy 1 and go N. to MP 75.43. Three small creeks are found within this site. Chadbourne Gulch Creek - (public) take dirt road at MP 75.43. Follow 0.1 miles to dirt lot. Lot accesses beach. Abalobidiah Creek - take private road at MP 71.50 to beach. Seaside Creek - (private) access directly from turnout at MP 70.65.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky bluffs excised by four small tidal inlets at Seaside Creek, Abalobadiah Creek, Kibesillah Creek, and Chadbourne Gulch. Tidal inlets are fine to medium grained sand. The remainder of the shoreline exposed rock cliffs, vertical seawalls, and wave-cut platforms. A small marsh exists within Abalobidiah Creek and is regularly flooded by the tide.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Seabird rookeries on Kibesillah Rock and Newport Rocks (03-09): Brandts Cormorant, Pelagic Cormorant, Western Gull, Black Oystercatcher, Pigeon Guillemot Shorebirds present. California Brown Pelican (FE,SE)(04-11).

B. Fish: Tidewater Goby(FE)(01-12) may be present in creeks. Redtail Surfperch, Surf and Night smelts spawn(04-08).

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Yountville

(707) 944-5500

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



## SITE SUMMARY SHEET

**SITE:** A-1-069 Ten Mile River

**OSPR Map #:** 030

**County:** Mendocino

**Lat:** 39 33'20" N

**USGS 7.5' Quad. name:** Inglenook

**Long:** 123 46'00" W

**NOAA Chart:** 18626

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on State Hwy 1 and go N. about 10 miles to Ten Mile River. Exit right onto dirt road at MP 69.22. Keep to right and follow for 0.4 miles to base of hill. Turn west (left) on small road (locked gate - get access form CSP) and follow for 1.8 miles. When road branches, go right, under Hwy 1 Ten mile River bridge. Continue about 0.5 miles to mouth of river.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal river crossing a wide sandy beach. Channel fixed alongside bedrock scarp on the N. side of valley. A very well developed marsh system exists landward of state Hwy 1 bridge (about .33 mile upriver from mouth.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Rare, threatened, or endangered plants and animals. Menzies Wallflower(SE,FPE), Leafy Reed Grass(R), Mendocino Coast Paintbrush(SE), Globose Dune Beetle(R), Tidewater Goby(FE) all(01-12). Snowy Plover(FT)(01-12) - critical nesting period(04-08). Nests directly on sand within dunes. Raptors incl. Osprey(CSC)(01-12).

B. Eelgrass and associated communities in estuary. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout(FSS):

- spawning runs(09-06)

- smolts/juveniles(02-08)

Chinook hatchery. Inverts: Juvenile Dungeness Crab nursery area(07-10).

C. Surf smelt, Night smelt, surfperch (04 - 08).

**ARCHAEOLOGICAL CONCERNS:** Archaeological sites exist in dunes to south of Ten Mile River.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bill Berry, Ca St Parks, Mendocino Dist HQ.

(707) 937-5004

Ca Dept of Fish and Game, Fort Bragg

(707) 964-9078

Yountville

(707) 944-5500

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

TENT MILE RIVER

Inlet Name INLET, CA

Recorder(s) NOHT/THG

Date/Time 12 Nov. 1992, 0800

Tide Stage Low (0.5 ft (-3.3) above

Inlet Classification B

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

xxxxxxx →

Recommended  
Oil-Catchment Area

✓

Salt-Water Marsh

~

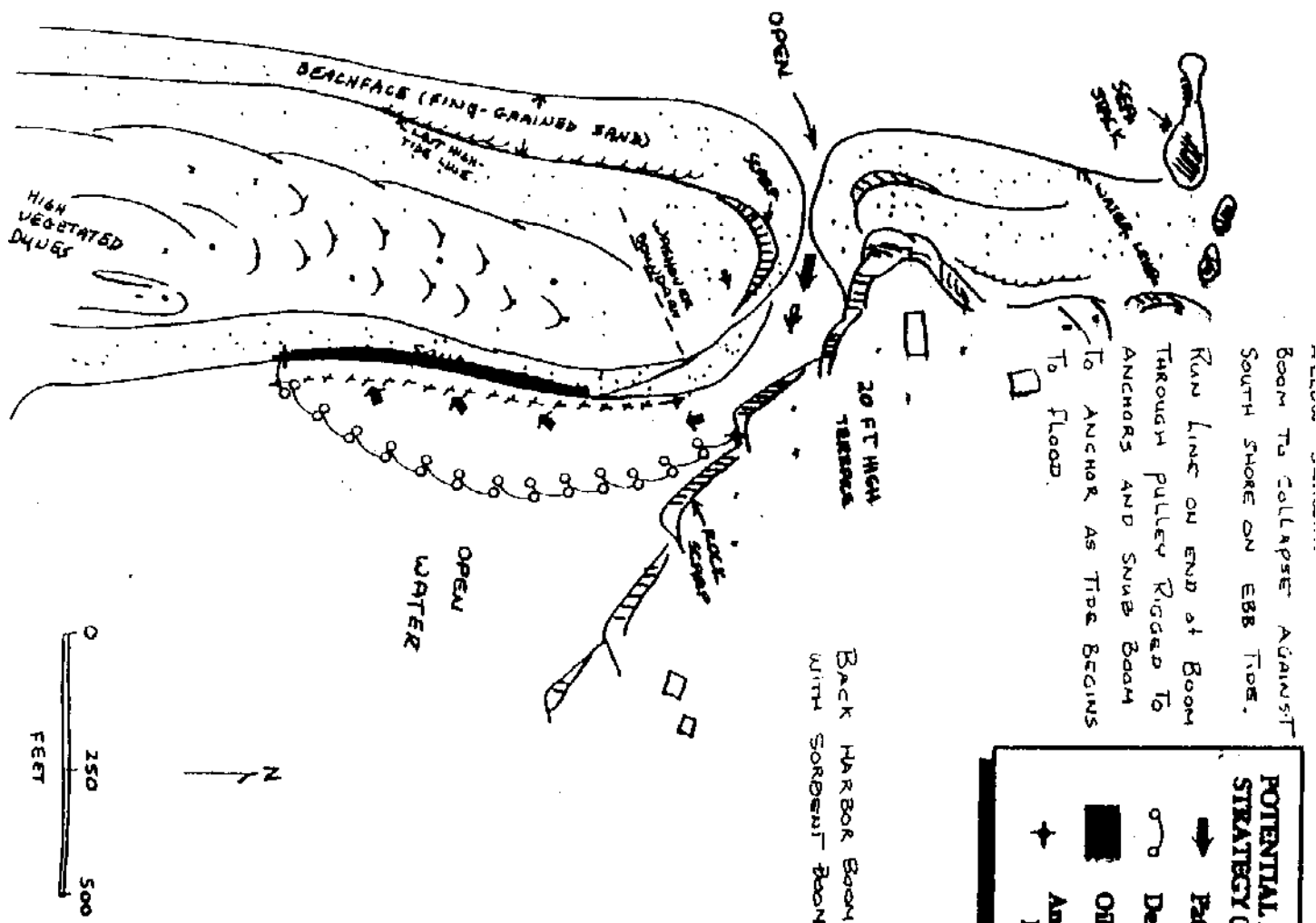
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



## SITE SUMMARY SHEET

**SITE:** B-1-070 Inglenook Creek and Sandhill Lake Creek

**OSPR Map #:** 030

**County:** Mendocino

**USGS 7.5' Quad. name:** Inglenook

**NOAA Chart:** 18626

**Lat/Long:** 39 32'/123 46'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on State Hwy 1 and go N. about 10 miles to Ten Mile River. Same access as for Ten Mile River (A-1-069) into the general area of the two creeks. Inglenook Creek is about 2 miles S. of the mouth of Ten Mile River and is accessible from the abandoned Georgia Pacific haul road. Sandhill Lake Creek is S. of Inglenook Creek by about 0.4 miles.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Wide sandy beach backed by vegetated dunes. Inglenook Creek and Seaside Creek are seasonal creeks that flow across the beach. The presence of woody debris well back into the streams where they cross the dunes indicates considerable tidal and winter storm influence.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Small amount of marsh habitat within stream mouths. Dune vegetation during response. Menzies' Wallflower(SE,FPE)(01-12), and Leafy Reed Grass(R)(01-12) are found within the area surrounding the two creeks. The Globose Dune Beetle (R)(01-12) is found within the area. Snowy Plover(FT)(01-12) - critical nesting period(04-08). Nests directly on sand within dunes.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bill Berry, Ca St Parks, Mendocino Dist HQ  
Ca Dept. of Fish and Game, Fort Bragg  
Mendocino County Sheriff's Dept. (24 hr.)  
Ca DFG - OSPR Dispatch (24 hr.)

(707) 937-5004  
(707) 964-9078  
(707) 463-4086  
(707) 445-0045

## SITE SUMMARY SHEET

**SITE:** B-1-071 McKerricher St Pk-Mill Crk

**OSPR Map #:** 030

**County:** Mendocino

**Lat/Long:** 39 29'/123 48'

**USGS 7.5' Quad. name:** Fort Bragg

**Rev:** 07/01/96

**NOAA Chart:** 18620, 18626

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on State Hwy 1 and go N. about 4 miles to Mill Creek Drive. Turn west into McKerricher State Park. Go to end of road, passing under log haul road trestle to parking lot at mouth of Mill Creek.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal tidal inlet at Mill Creek. Creek is flanked on the N. by a medium to coarse grained sandy beach. On the south by a rocky scarp.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Mendocino Paintbrush(T)(1-12) is found in the dunes to the north of the creek and could be impacted by response activities. Shorebirds are found in the area(1-12).

B. Surf smelt(04-08). Surf perch(04-07).

**ARCHAEOLOGICAL CONCERNS:** Archaeological sites are found in the dunes to the north of this site.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bill Berry, Ca St Pk, Mendocino Dist HQ,

(707) 937-5804

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

MILL CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/TMH

Date/Time 12 NOV 01 1442; 0710

Tide Stage LOW @ 0521 (+3.3); NOV 01  
2007

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

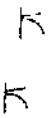
## LEGEND

-----xxxxxxx-----

Recommended  
Oil-Catchment Area



ROCKS



Salt-Water Marsh



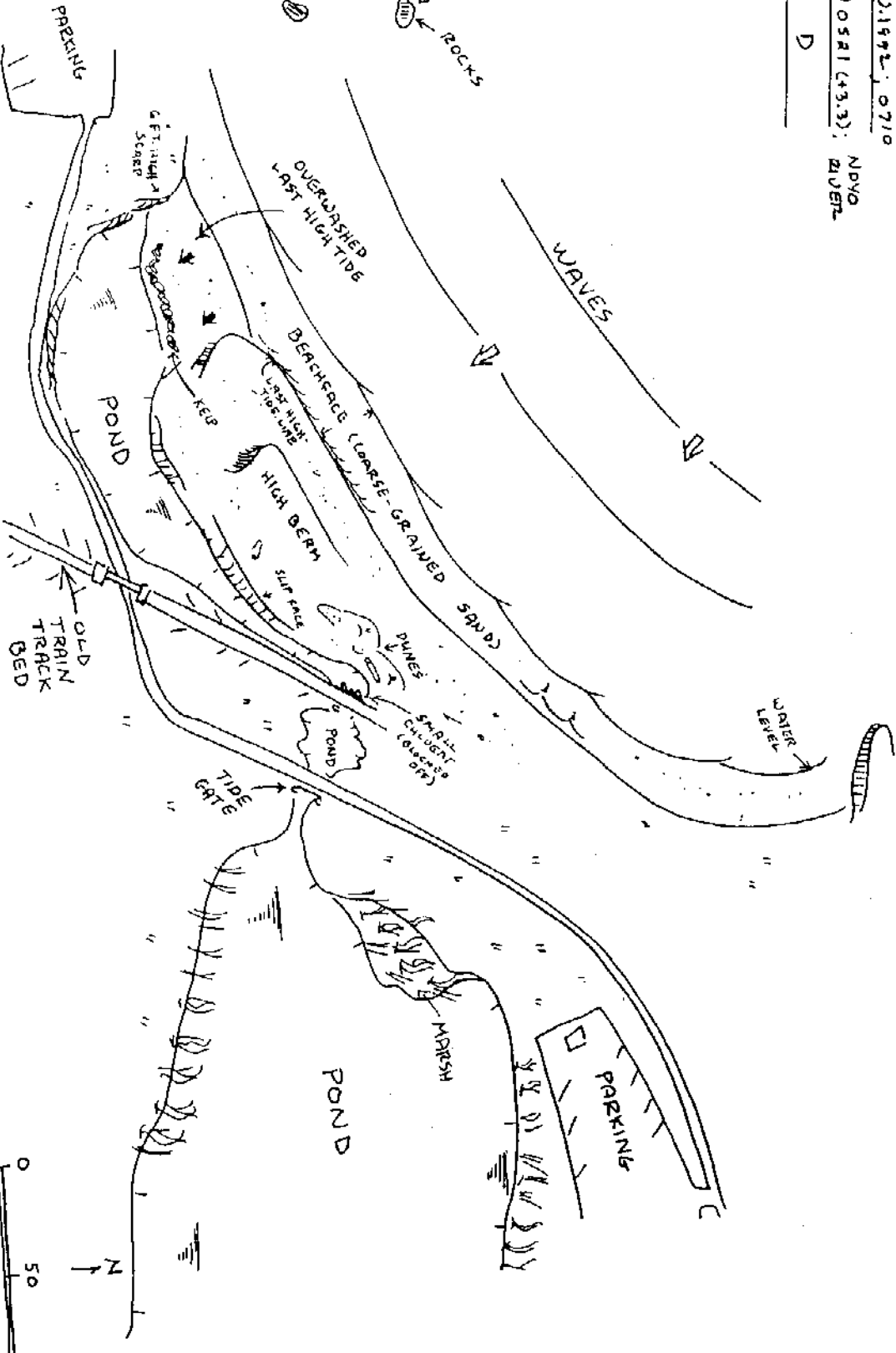
Fresh-Water Marsh



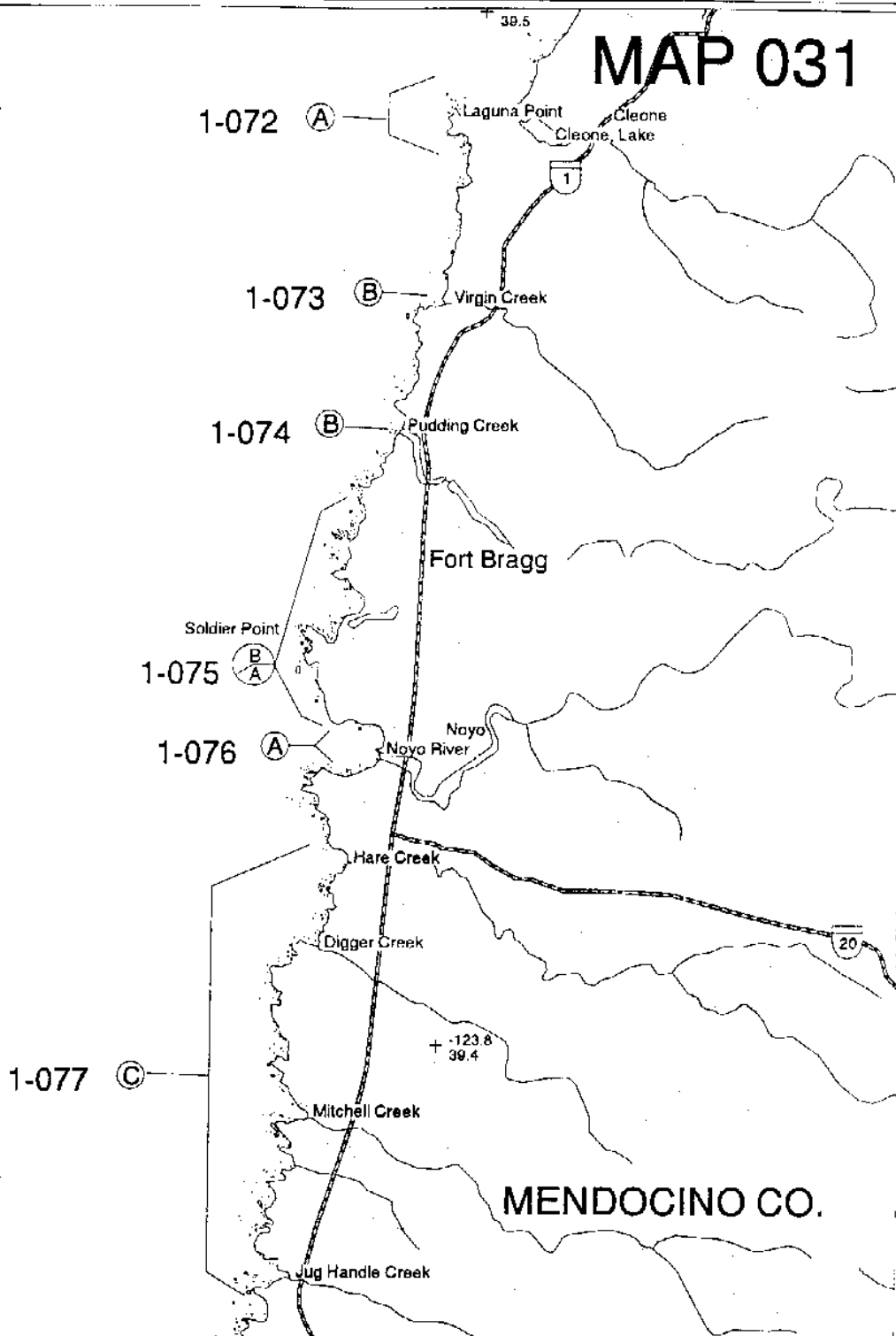
High-Tide  
Overwash Zone



Last High-Tide  
Swash Line



# MAP 031



## ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993

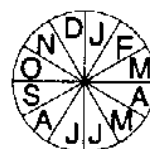
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ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

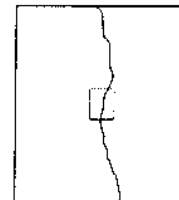
E-V-154

change #1



SEASONALITY

## INDEX MAP



This map includes USGS quad sheets of Fort Bragg

The comparable NOAA nautical chart is Elk to Fort Bragg

## SITE SUMMARY SHEET

**SITE:** B-1-072 McKerricher St Pk-Laguna Pt.

**OSPR Map #:** 031

**County:** Mendocino

**USGS 7.5' Quad. name:** Fort Bragg

**NOAA Chart:** 18626

**Lat/Long:** 39 29'30"/123 48'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Turn W. on State Hwy 20 and continue to State Hwy 1 at Fort Bragg. Turn N. on State Hwy 1 and go N. about 4 miles to Mill Creek Drive. Turn west into McKerricher State Park. Go to end of road, passing under log haul road trestle to parking lot at mouth of Mill Creek and trails to Laguna Pt.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky headland, wave-cut platforms, intertidal and offshore      seawacks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabirds and Shorebirds are found throughout the area (1-      12). Harbor Seals - haul outs, pupping, and nursery area(01-12).

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bill Berry, CA St. Pks, Mendocino District HQ

(707) 937-5804

Ca Dept. of Fish and Game, Fort Bragg Office

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** B-1-073 Virgin Creek

**OSPR Map #:** 031

**County:** Mendocino

**USGS 7.5' Quad. name:** Inglenook

**NOAA Chart:** 18626

**Lat/Long:** 39 28'/123 47'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 to State route 20 West at Willits. Follow State route 20 West to State route 1. Turn into public parking lot just past Beachcomber Motel. Proceed to locked gate on Haul Road at rear of parking lot (see \*). Accessibility limited to width between railroad bridge stanchions (14').

Alternate Route: State route 1 north from Fort Bragg, turn left onto Mill Creek Drive MP 65.03 to another locked gate on Haul Road. Proceed left onto Haul Road to inlet(1.2 miles).

\* Land purchased by CSP. They have keys to all logging road gates. Call 707-964-5651 for keys.  
Gate at parking lot is called Main gate.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal tidal inlet. Creek flows along bedrock outcropping on its S. side and then across a broad medium grained sand beach.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: area is visited by shorebirds and seabirds. Snowy Plover(FT)(01-12) - critical nesting period(04-08). Nests directly on sand within dunes.

**ARCHAEOLOGICAL CONCERNS:** yes

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Ca St. Pk., Mendocino Dist HQ,

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



## SITE SUMMARY SHEET

**SITE:** B-1-074 Pudding Creek

**OSPR Map #:** 031

**County:** Mendocino

**Lat:** 39 27'30" N

**USGS 7.5' Quad. name:** Fort Bragg

**Long:** 123 48'30"

**NOAA Chart:** 18620

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Go west on State Hwy 20 to State Hwy 1 at Fort Bragg. Go north on State Hwy 1 about 3 miles to Pudding Creek bridge (North end of Fort Bragg). Take Pudding Creek Beach road to parking lot on the west side of state Hwy 1 near the mouth of Pudding Creek. Heavy equipment access to the beach is possible at this point.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal tidal inlet across wide sandy beach. Intertidal and nearshore sea-stacks south of the creek entrance and, wave-cut platforms to the north. Some fringing marsh exits about .3 miles up-stream. A wooden trestle bridge crosses the creek about 100 yards up-river of it's mouth.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Tidewater Goby(FE)(01-12), Osprey(CSC)(01-12).

B. Fringing marsh. Visiting seabirds and shorebirds Barnacles, mussels, associated inverts. in intertidal zone.

**ARCHAEOLOGICAL CONCERNS:** Yes. \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Bill Berry, CA St. Prks., Mendocino Dist HQ.

(707) 937-5804

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

PUDING CREEK

Inlet Name INLET, LA.

Recorder(s) MDH/THM

Date/Time 11/20/1992, 1615

Tide Stage Low (1741(-0.7)), NOV

Inlet Classification C

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

—xxxxxxx—

Recommended  
Oil-Catchment Area

✓ ✓

Salt-Water Marsh

§

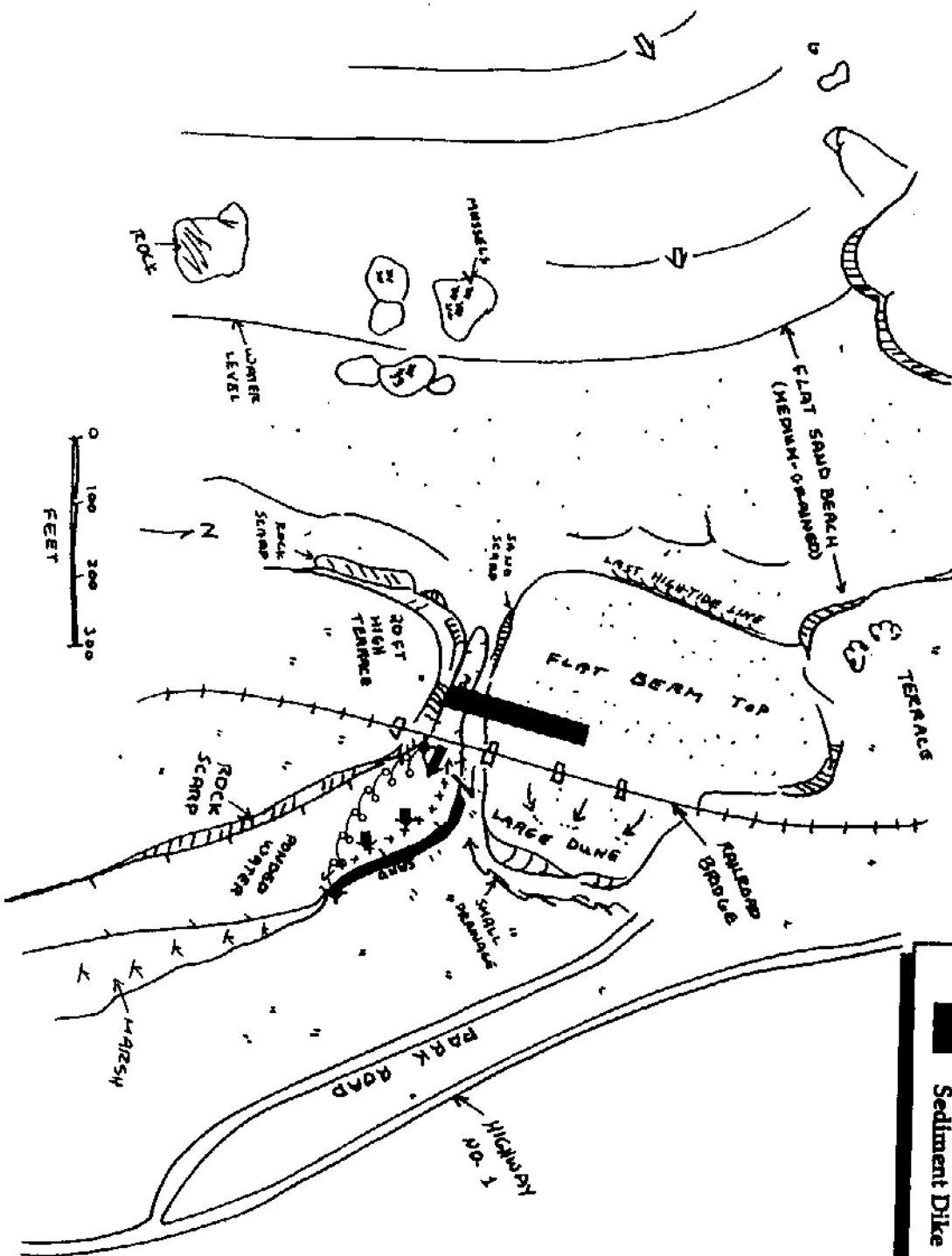
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



## POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- ~ Deflection Boom
- Oil On Shoreline
- + Anchor Point/Hinge Line
- Sediment Dike

## SITE SUMMARY SHEET

**SITE:** A-1-075 Soldier Point

**OSPR Map #:** 031

**County:** Mendocino

**USGS 7.5' Quad. name:** Fort Bragg

**NOAA Chart:** 18620

**Lat/Long:** 39 26'30"/123 49'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Go west on State Hwy 20 to State Hwy 1 at Fort Bragg. Go north on State Hwy 1 to Oak Street in the town of Fort Bragg. Turn west into the Georgia Pacific Corporation Mill. Site A-1-075 lies entirely within Corporation boundaries.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky coastal headland consisting of wave-cut platforms, bedrock outcroppings, and sea stacks (85 %). About 15 % of shoreline lies within pocket coves consisting of coarse grained sand and pebbles. Short section (200 feet) riprap near mill outfall. Moderate debris consisting primarily of algae and light woody debris is found on most beaches. Area fully exposed to wave energy.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird colonies

B. Epibiotic communities: mytilus, barnacles, urchins, abalone.

C. Marine mammals. haulout for harbor seals, others.

D. Algal communities consisting primarily of Nereocystus, Postelsia, various laminaria, and encrusting corraline algae. Phyllospadix (Surfgrass)

**ARCHAEOLOGICAL CONCERNS:** Cemetery for early sailors located on bluff top above Noyo Harbor entrance.

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

Georgia Pacific Corporation

Mendocino County Sheriff's Dept. (24 hr.)

Ca DFG - OSPR Dispatch (24 hr.)

(707) 964-9078

(707) 964-5651

(707) 463-4086

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-076 Noyo Harbor Entrance and Dolphin Cove

**OSPR Map #:** 031

**County:** Mendocino

**Lat:** 39 25'30" N

**USGS 7.5' Quad. name:** Mendocino

**Long:** 123 48'30" W

**NOAA Chart:** 18626

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Noyo Harbor entrance: from U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Turn north on state hwy 1 and continue to the north side of the Noyo River bridge. Turn east on North harbor Drive and continue to it's end (about 1 mile).

Dolphin Cove: from Hwy 20, 0.25 miles E. of Hwy 1, turn N. on S. Harbor Drive. Go 0.25 miles to base of grade and turn right on Basin St. Follow Basin St. past USCG station and harbormasters office to it's end at Dolphin Cove Marina (1.5 miles).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Permanently stabilized inlet subject to large waves, strong tidal currents, and strong river outflow. A fine\medium-grained sand beach lies just north of the north jetty. The entire shoreline between the jetties and the state Hwy 101 bridge is gravel or riprap. Both sides of the river channel for about .75 miles up-river is highly developed with piers on pilings.

Two marinas exist in the river. A large marina for commercial and recreational boats is located about .75 miles up-river. A smaller marina named Dolphin Cove is located about 2 miles up-river. See SISRS.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Coastal seabirds, shorebirds, waterfowl incl.

Osprey(CSC)(01-12)

B. Fish: Anadromous salmonids: Coho Salmon(FPT) and Steelhead trout(CSC):

- spawning runs(09-06)

- juveniles/smolts(02-08)

Inverts: Juvenile Dungeness Crab Nursery(07-10)

C. Surfperch and Surfsmelt spawn on the outer beaches.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

Inlet Name NOVO HARBOR  
ENTRANCE, CA.

Recorder(s) MCH/THH

Date/Time 11 Nov. 1991, 1550

Tide Stage Low @ 1741 (-0.7)

Inlet Classification A

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

xxxxxxx

Recommended  
Oil-Catchment Area

X X

Salt-Water Marsh

§

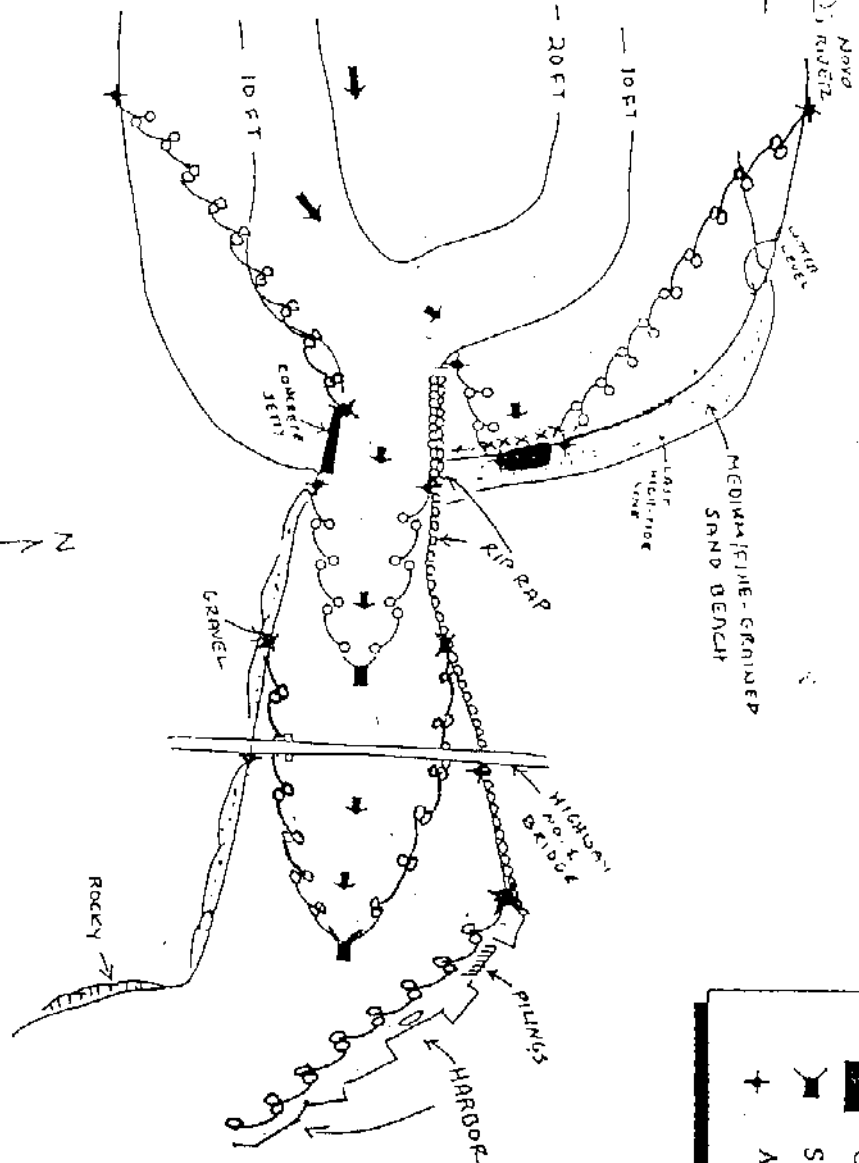
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



**POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)**

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- ⌘ Skimmer Placement
- + Anchor Point / Hinge Line

# SKETCH MAP

Site name and no. Noyo Harbor/Noyo River Inlet (Dolphin Cove) A-1-076

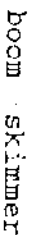
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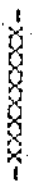
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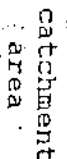
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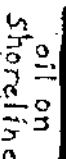
## LEGEND

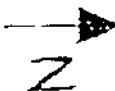
 boom skimmer

 oil catchment area

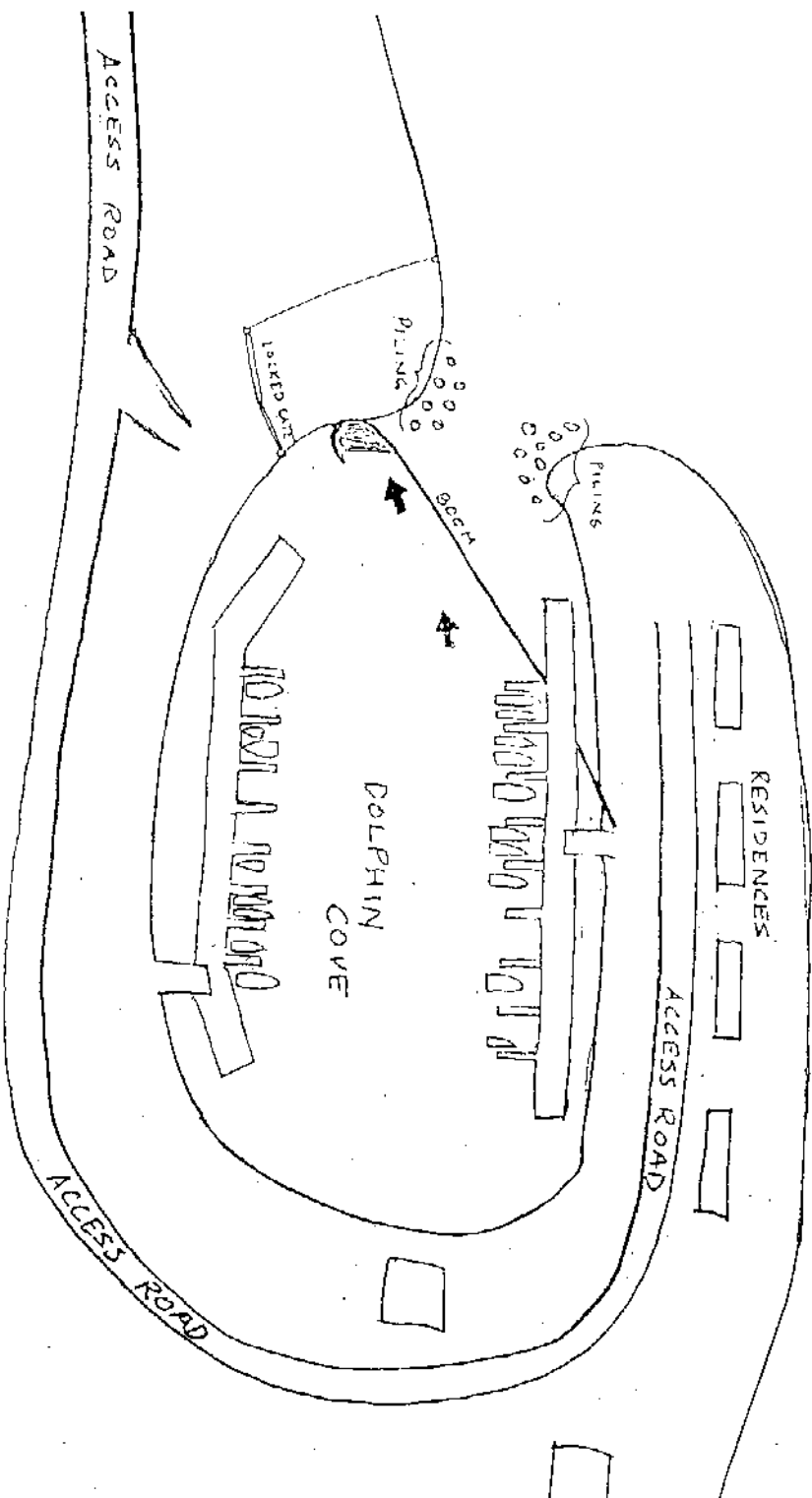
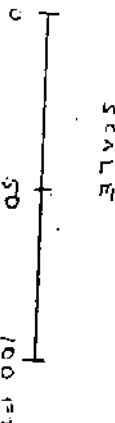
 oil on shoreline

 path of oil

 anchor point/hinge line



Noyo River



## SITE SUMMARY SHEET

**SITE:** B-1-077 South Fort Bragg

**OSPR Map #:** 031

**County:** Mendocino

**USGS 7.5' Quad. name:** Fort Bragg

**NOAA Chart:** 18626

**Lat:** 39 24'30" N

**Long:** 123 49'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Go west on State Hwy 20 to State Hwy 1 at Fort Bragg. Turn south on State Hwy 1.

Hare Creek - From Hwy 1, just S. of the Hwy 1 Hare Crk, bridge, turn southwest on Old Coast Rd at MP 59.60. After 0.2 mi. turn W. on Cypress Rd. Follow to 18700 Cypress Rd. A small, steep foot trail leads to the Creek. Equipment may access the creek on the northside of the river. Turn W. at (signal light) leading to College of the Redwoods and follow road to it's end. Access will be difficult because of private property along river bank. Contact private property owners. Some damage might occur to lawns and fences. Otherwise, the slope to the river appears low enough to permit equipment access.

Digger Creek may be accessed by foot only through the private botanic gardens S. of Hare Creek.

Mitchell Creek - From Hwy 1, south of Fort Bragg, turn W. on Ocean Drive at MP 57.50. Follow Ocean Drive 0.3 miles to Pine Beach Inn parking lot.

Jughandle Creek - Access by foot only from parking lot on W. side of Hwy 1, south of Ft. Bragg, at MP 56.00.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Four seasonal tidal inlets (Hare Creek, Mitchell Creek, Jughandle Creek, Digger Creek) excising coastal bluffs and flowing across medium grained sandy beaches are found within this site. Small lagoons occasionally form within each creek, but because of the ephemeral nature of the lagoons, wetlands (marshes) have not formed. High tides probably overwash into the lagoons.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. All three creeks are visited by foraging shorebirds and seabirds.

**ARCHAEOLOGICAL CONCERNS:** Yes, at Digger Creek.



**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg	(707) 964-9078
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086
Ca DFG - OSPR Dispatch (24 hr.)	(916) 445-0045
Bill Berry, CA ST Parks, Mendocino Dist. HQ,	(707) 937-5804

# INLET SKETCH MAP

HARE CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 11 JUL 1992; 1515

Tide Stage LOW (2) 1741 (-07); RIVER NOVO

Inlet Classification D

## CHECKLIST

- ✓ North Arrow
- ✓ Scale
- ✓ High-Tide Line
- ✓ Low-Tide Line
- ✓ Substrate Type

## LEGEND

—xxxxxxx—

Recommended  
Oil-Catchment Area

⌞ ⌞

Salt-Water Marsh

⌞

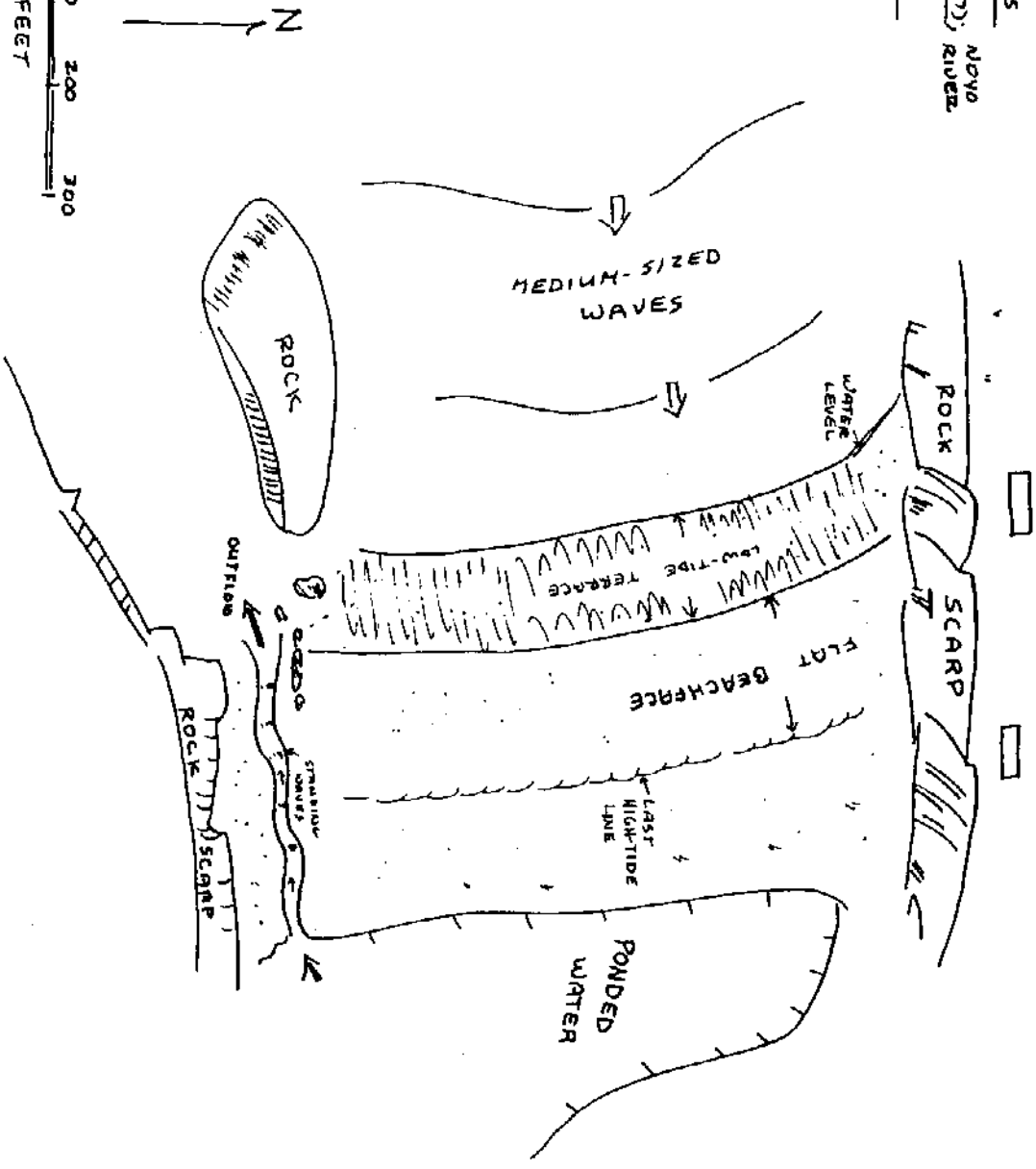
Fresh-Water Marsh

→ →

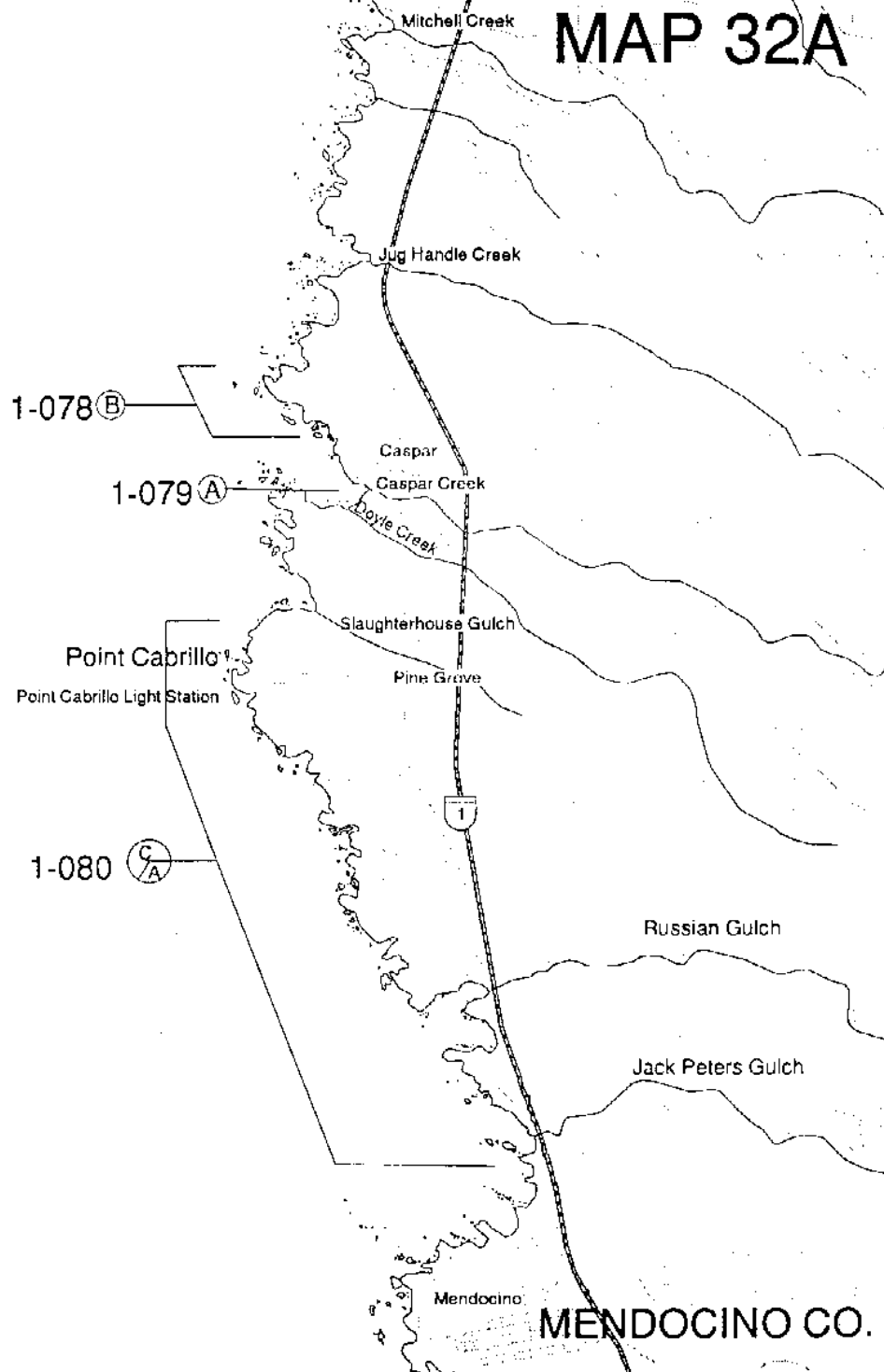
High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



# MAP 32A



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

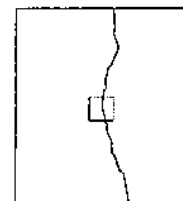
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0 1 2 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-V-173 Change #1

## INDEX MAP



This map includes USGS quad sheets of Mendocino

The comparable NOAA nautical chart is Albion to Casper

## SITE SUMMARY SHEET

**SITE:** B-1-078 Caspar Point

**OSPR Map #:** 32A

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18626

**Lat/Long:** 39 22'/123 49'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Go west on State Hwy 20 to State Hwy 1 at Fort Bragg. Turn south on State Hwy 1. Continue until town of Caspar is reached. This town is located on Caspar Point.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Steep rocky headlands and offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird colonies. Primarily Pelagic Cormorant, Pigeon Guillemot, and Western Gull.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

William Berry, Ca ST Parks, Mendocino Dist. HQ

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-079 Caspar Creek and Doyle Creek

**OSPR Map #:** 32A

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18626

**Lat/Long:** 39 21'30"/123 49'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 to Willits. Go west on State Hwy 20 to State Hwy 1 at Fort Bragg. Turn south on State Hwy 1. Take Pt. Cabrillo Drive (MP 54.66) W. from Hwy 1 on the S. side of Caspar Ck bridge. Follow for 0.5 miles to pull out on Caspar Crk beach. Access for beach is VIA Sandy Rd. 0.3 miles past turnout and near Caspar Beach RV park.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Creeks flow alongside bedrock bluffs (Caspar Creek along the North Bluff; Doyle the South bluff) and across medium grained sandy beaches. Caspar Creek has a small lagoon with a fringing marsh on it's east side. Some wetland areas also exist along Doyle Creek. Riprap fronts the access road at the back of the beach and could be oiled under storm conditions.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

- A. Freshwater and saltwater marsh areas in Caspar and Doyle Creeks.
- B. Foraging seabirds and shorebirds. Waterfowl resting, feeding, nesting in the small Caspar Creek lagoon.
- C. Steelhead trout(FSS) - spawning(10-06), juveniles/smolts(02-08).

**ARCHAEOLOGICAL CONCERNS:**

---

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                                                 |                |
|-----------------------------------------------------------------|----------------|
| Ca Dept. of Fish and Game, Fort Bragg                           | (707) 964-9078 |
| Coastal Conservancy, Steve Horn. (maintains Pt. Cabrillo Light) | (707) 937-0816 |
| Mendocino County Sheriff's Dept. (24 hr.)                       | (707) 463-4086 |
| Ca. DFG - OSPR Dispatch (24 hr.)                                | (707) 445-0045 |

# SKETCH MAP

Site name and no. Caspar Creek (Caspar Creek and Doyle Creek) E-1-079

## CHECK-LIST

North arrow

Scale

## LEGEND

boon skimmer

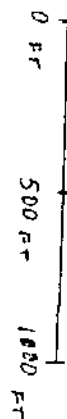
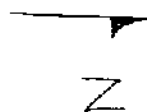
oil

catchment area

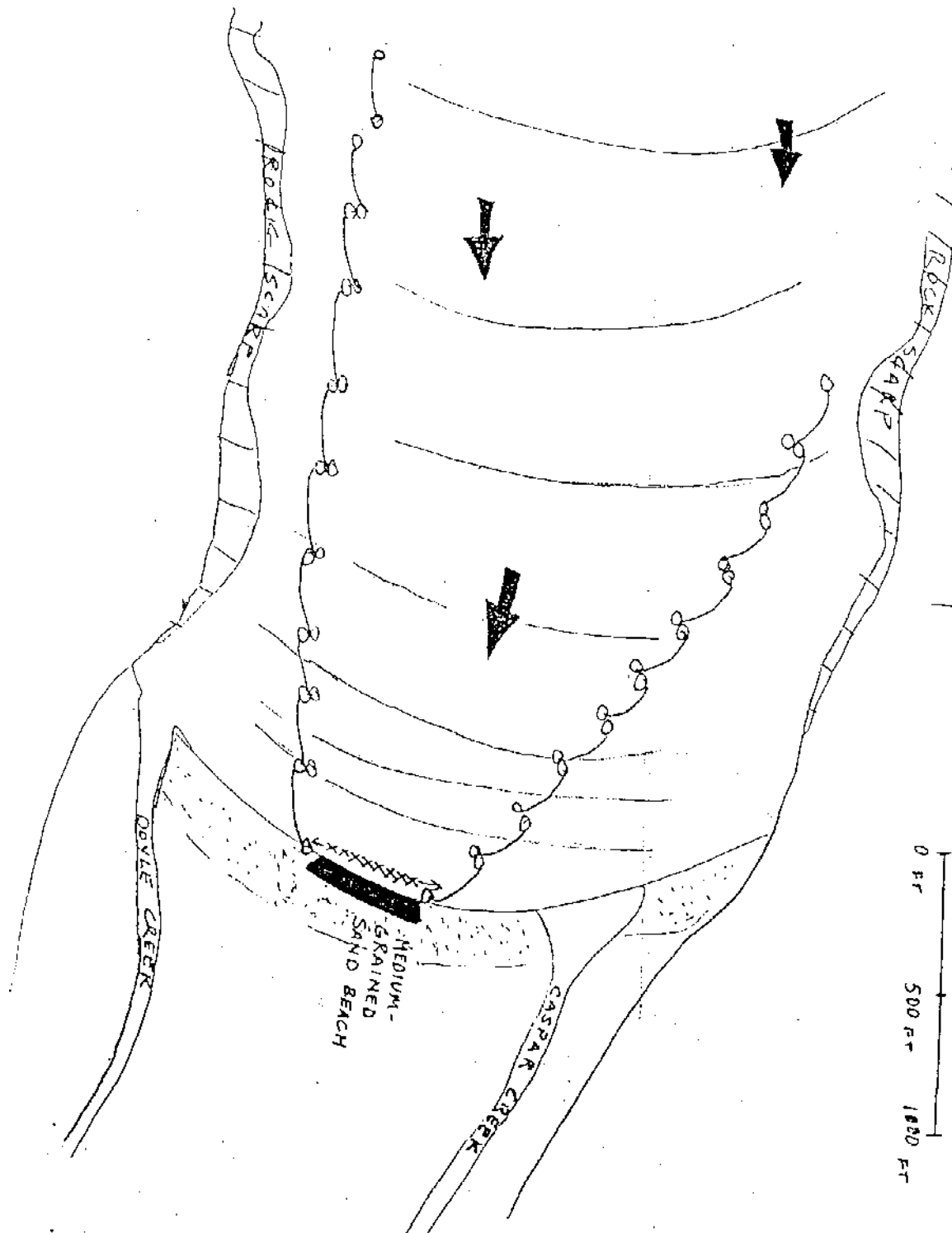
oil on shoreline

path of oil

anchor point/hinge line



SCALE



## SITE SUMMARY SHEET

**SITE:** A-1-080 Pt Cabrillo to Russian Gulch

**OSPR Map #:** 32A

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18626

**Lat:** 39 20'30" N

**Long:** 123 49'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Go south on state hwy 1 to (MP 54.66). Continue 1.2 miles, passing Caspar Creek Beach, to Lighthouse road. Turn west on Lighthouse road to unlocked gate.

For access to Russian Gulch. Exit W. form Hwy 1 at S. exit to Pt. Cabrillo Drive (MP 52.97). Immediately turn left into Russian Gulch St. Park entrance. Continue 0.5 miles to end of road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Ca DFG Marine Reserve. Fully exposed bedrock outcroppings and wave-cut platforms. Surge channels and pocket coves with sheer bedrock walls. Some channels and pocket coves have gravel beaches at their inland end. Algal debris abundant in some protected channels and coves. No facilities. Access to beach limited by steep rock walls. Jack Peters creek excises a deep gulch and flows across a medium grained sand beach. No lagoon or wetlands present.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabirds. Black Oystercatchers, Pelagic Cormorants, and Pigeon Guillemots (4 - 8). Lotus Blue butterfly (FE)(01-12) in sphagnum bogs within stands of pine near the point.

B. Epifauna includes abalone, mussels, urchins, goose-neck barnacles sensitive throught the year.

Harbor Seal - Haul outs and pupping areas

Steelhead trout(FSS) - spawning run(10-06), juveniles/smolts(02-08)

C. Predominant flora is Postelsia, Nereocystus, and Egregia. Sensitive throughout the year.

**ARCHAEOLOGICAL CONCERNS:** no

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Ca St. Parks, Mendocino Dist HQ,

(707) 937-5804

Caretaker, Pt. Cabrillo light, Coastal Cons.

(707) 937-0816

Mendocino County Sheriff's Dept. (24 hr.)

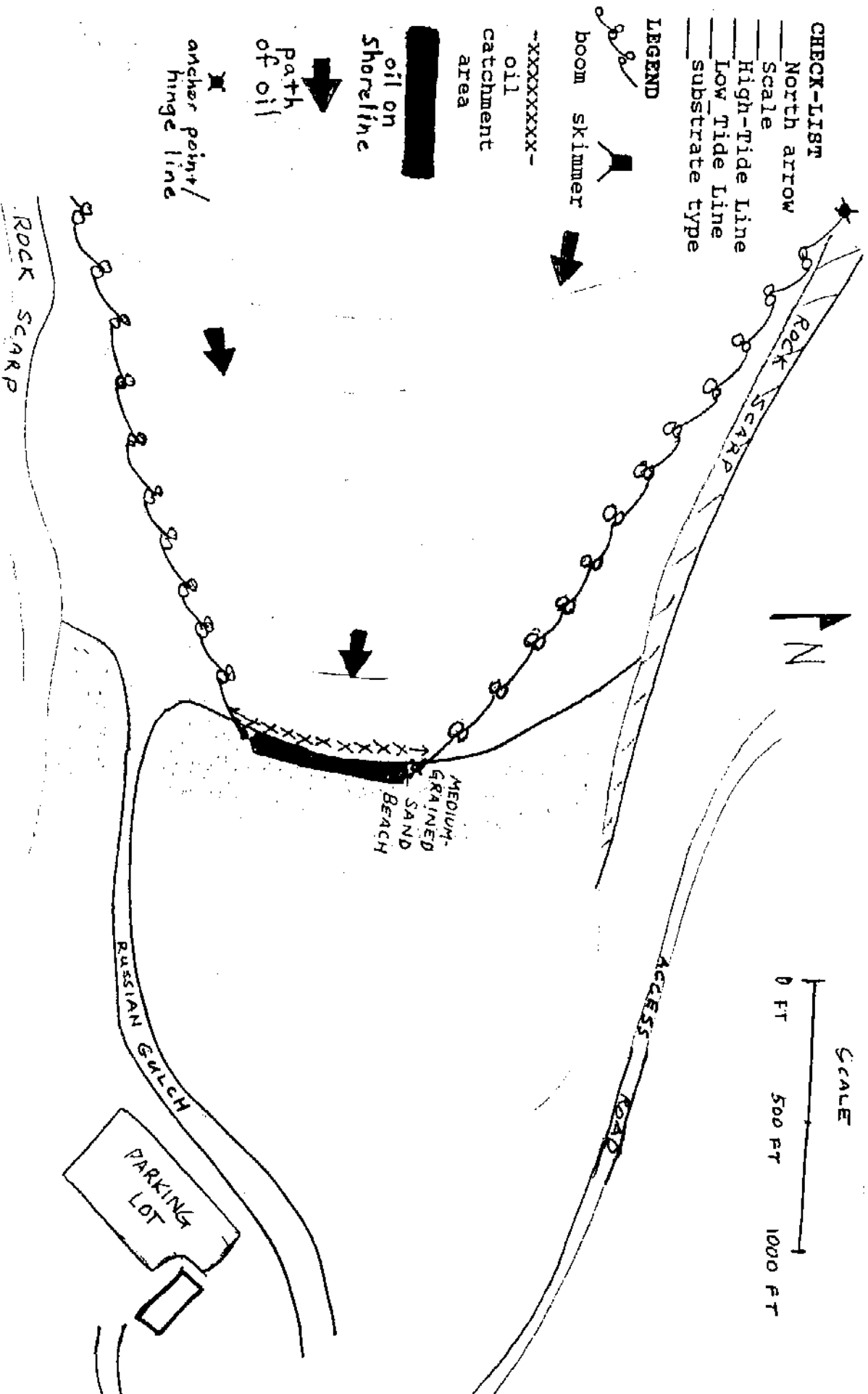
(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# SKETCH MAP

Site name and no. Point Cabrillo (Russian Gulch) A-1-080





# MAP 32B

1-081 (B)

1-082 (A)

1-083 (B)

1-084 (C/A)



## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SCALE = 1:40481

0 1 2 MILES

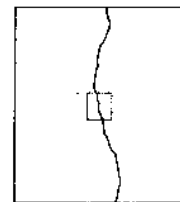
ALBERS PROJECTION, NORTH AMERICAN DATUM OF 1927

E-V-181 change #1



SEASONALITY

## INDEX MAP



This map includes USGS quad sheets of Mendocino

The comparable NOAA nautical chart is Albion to Casper

## SITE SUMMARY SHEET

**SITE:** B-1-081 Mendocino Headlands St. Pk.

**OSPR Map #:** 32B

**County:** Mendocino

**Lat/Long:** 39 18'123 48'30"

**USGS 7.5' Quad. name:** Mendocino

**Rev:** 07/01/96

**NOAA Chart:** 18626:

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Go south on state hwy 1 to the Mendocino exit from state hwy 1. In Mendocino, take Heeser Drive to it's end at the headlands.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky bluffs, surge channels, seastacks and offshore rocks. Fully exposed to wave energy.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird colonies, primarily for Pelagic Cormorant, Pigeon Guillemot, and Western Gull.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Ca St. Parks, Mendocino Dist HQ,

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# SITE SUMMARY SHEET

**SITE:** A-1-082 **Big River**

**OSPR Map #:** 32B

**County:** Mendocino

**Lat/Long:** 39 18'/123 47'30"

**USGS 7.5' Quad. name:** Mendocino

**Rev:** 07/01/96

**NOAA Chart:** 18626

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Go south on Hwy 1. From hwy 1, south side of hwy 1 bridge over Big River at Mendocino, go east on North Big River Rd. Follow road 0.2 miles to parking lot. At low tide, vehicles could access mouth of river by proceeding along beach approx. 0.5 miles. At higher tides, no access to mouth is possible by vehicle. Boat launch on N. side of river is avail. It is nr. the parking lot on N. Big River Road.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Wide sandy tidal inlet with well developed marsh complex upstream along channel margins. Strong tidal currents.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Area is visited by foraging shorebirds and seabirds Osprey(CSC)(01-12).

B. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout(CSC):

- spawning runs(09-06)
- juveniles/smolts(02-08)

Herring spawn in eelgrass. River serves as dungeness crab nursery at times.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                           |                |
|-------------------------------------------|----------------|
| Ca Dept. of Fish and Game, Fort Bragg     | (707) 964-9078 |
| Ca St. Parks, Mendocino Dist HQ,          | (707) 937-5804 |
| Mendocino County Sheriff's Dept. (24 hr.) | (707) 463-4086 |
| Ca DFG - OSPR Dispatch (24 hr.)           | (916) 445-0045 |

# INLET SKETCH MAP

DIG RIVER

Inlet Name INLET, CA.

Recorder(s) MOH/THH

Date/Time 11/20/1972, 11:00

Tide Stage Low (1791(-0.7)) NOV 20

Inlet Classification B

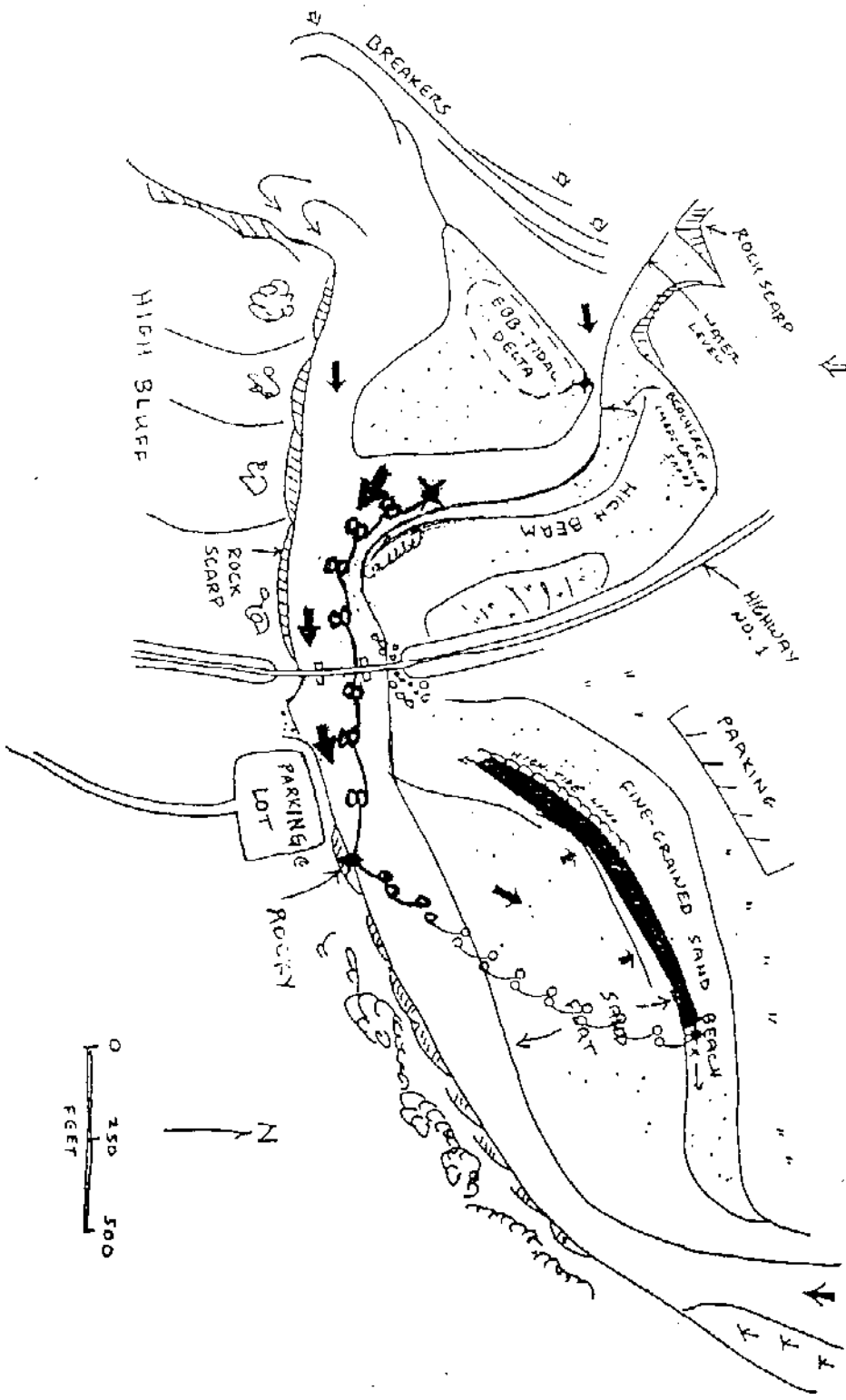
## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

- xxxxxxx Recommended Oil-Catchment Area
- ✓ Salt-Water Marsh
- ✓ Fresh-Water Marsh
- High-Tide Overwash Zone
- ~~~~~ Last High-Tide Swash Line

MEN DO CINO



**POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)**

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- + Anchor Point / Hinge Line

## SITE SUMMARY SHEET

**SITE:** B-1-083 Mendocino Bay

**OSPR Map #:** 32B

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18626

**Lat:** 39 15'30" N

**Long:** 123 47'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Go south on Hwy 1. From hwy 1, south side of hwy 1 bridge over Big River at Mendocino, go east on North Big River Rd. Follow road 0.2 miles to parking lot.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Large crescent shaped bay opening to the west. Big River (A-1- 082) enters the ocean at this point. Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Brandts and Pelagic Cormorant, Black Oystercatcher, Western Gull, Pigeon Guillemot, Tufted Puffin(CSC) Roosts(01-12).

B. Marine Mammals: Use area for haul-outs

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_  
\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg

(707) 964-9078

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-084 Van Damme State Park and Little River

**OSPR Map #:** 32B

**County:** Mendocino

**USGS 7.5' Quad. name:** Mendocino

**NOAA Chart:** 18626

**Lat/Long:** 39 18'/123 48'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Willits, take state hwy 20 to state hwy 1 at Fort Bragg. Go south on Hwy 1 to MP 48.03, about 3 miles south of the town of Mendocino. Van Damme St. Park lies alongside state hwy 1. Little River crosses the beach at this point.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Little River crosses a medium to coarse grained sandy beach (Van Damme State Park) to reach a small crescent shaped bay. Gradient is steep. No wetlands or marsh areas likely to be impacted. Offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Shorebirds forage along Van Damme State Park beach Seabird rookeries(03-09): Pelagic Cormorant, Pigeon Guillemot, Western Gull, are Tufted Puffin(CSC). Roosts (01-12). Osprey(CSC)(01-12).

B. Kelp beds are located offshore of the beach. A variety of algae are found on the offshore rocks.

C. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout:

- spawning runs(09-06)
- juveniles/smolts(02-08)

D. Pacific Harbor Seal haul-out.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg  
Ca St. Parks, Mendocino Dist HQ,  
National Marine Fisheries Service, Joe Cordaro  
Mendocino County Sheriff's Dept. (24 hr.)  
Ca DFG - OSPR Dispatch (24 hr.)

(707) 964-9078  
(707) 937-5804  
(310) 980-4017  
(707) 463-4086  
(916) 445-0045

# INLET SKETCH MAP

LITTLE RIVER

Inlet Name INLET, CA.

Recorder(s) MOH/TMH

Date/Time 11 NOV. 1991, 1230

Tide Stage HIGH @ 1116 (16.4), NOAD RIVER

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

XXXXXXX

Recommended  
Oil-Catchment Area

✓

Salt-Water Marsh

~

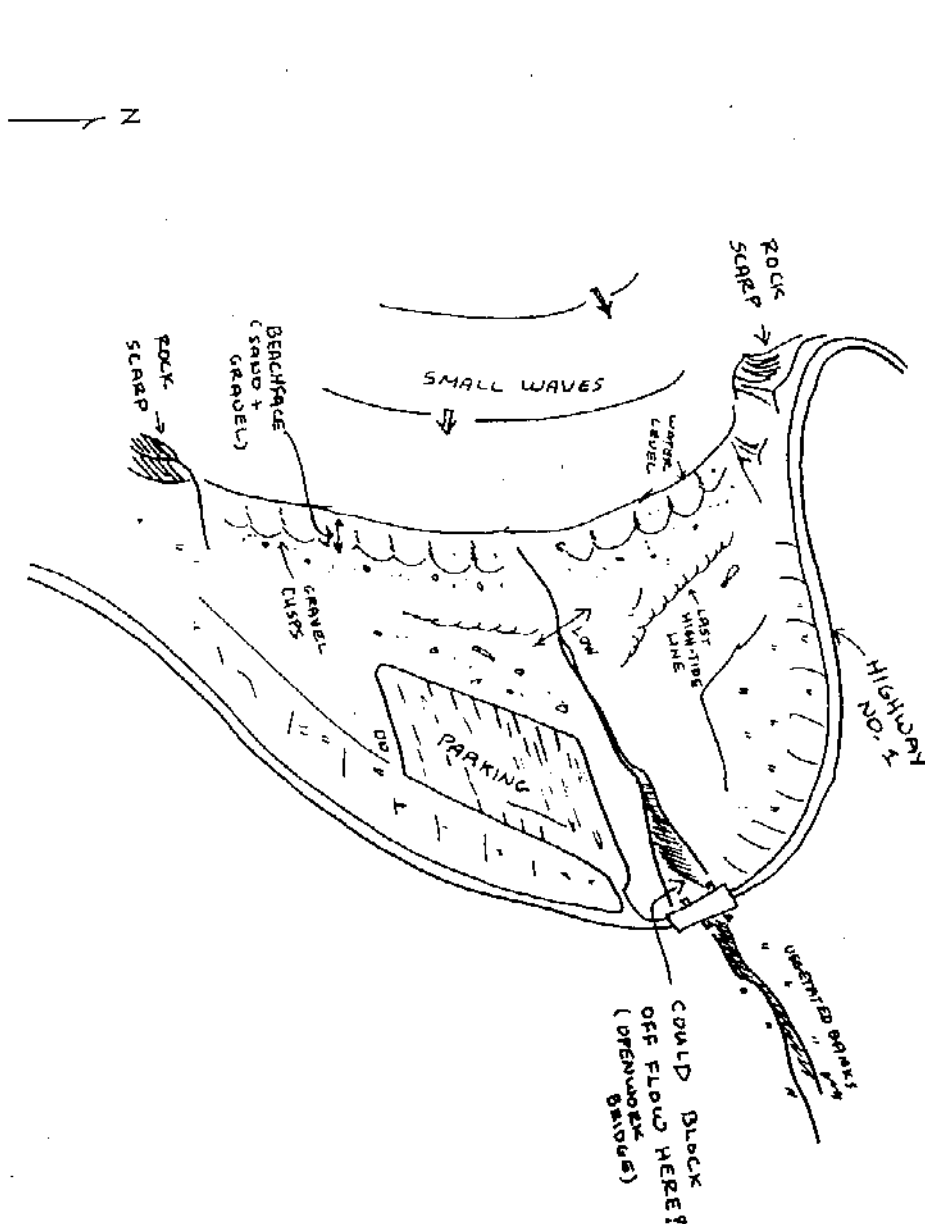
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



# MAP 033-034

1-085

(B)

1-086

(A)

1-087

(A)

+ -123.8  
39.2

1-088

(A)

1-089

(C/A)

MENDOCINO CO.

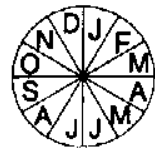


Albion  
Elk

## ENVIRONMENTAL SENSITIVITY RANKING

- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



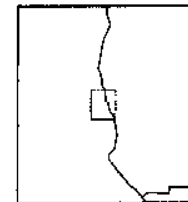
SEASONALITY

SCALE - 1:58117

0 1 2 3 MILES

ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

## INDEX MAP



This map includes USGS quad sheets of Albion & Elk

The comparable NOAA nautical chart is Elk to Fort Bragg



## SITE SUMMARY SHEET

**SITE:** B-1-085 Dark Gulch

**OSPR Map #:** 033-034

**County:** Mendocino

**Lat/Long:** 39 14'/123 47'

**USGS 7.5' Quad. name:** Albion

**Rev:** 07/01/96

**NOAA Chart:** 18626

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Cloverdale, take state hwy 128 to state hwy 1 at the mouth of the Navarro River. Go south on Hwy 1 to Heritage House Inn (MP 45.47). Beach accessible by foot, only. A crane could access bluffs (80 feet above beach). Limited access by boats because of depth limitations.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Steep gradient coastal stream. Cobbled beach with kelp debris. Bedrock headlands. Offshore rocks and seastacks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): Rocky headlands, offshore rocks, and seastacks shelter Pelagic Cormorant, Pigeon Guillemot, Western Gull, Black Oystercatcher.

B. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout(FSS):

- spawning runs(09-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

\_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg	(707) 964-9078
Ca St. Parks, Mendocino Dist HQ,	(707) 937-5804
Heritage House Inn (Property owner),	(707) 937-5885
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086
Ca DFG - OSPR Dispatch (24 hr.)	(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-086 Albion River

**OSPR Map #:** 033-034

**County:** Mendocino

**USGS 7.5' Quad. name:** Albion

**NOAA Chart:** 18626

**Lat:** 39 13' 30" N

**Long:** 123 47' 30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Cloverdale, take state hwy 128 to state hwy 1 at the mouth of the Navarro River. Go south on Hwy 1 to MP 45.47, at the north end of the Albion River bridge. Turn east on Albion Riverside Road at this point and follow road to Albion River Campground.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Navigable tidal inlet. Offshore rocks. Vertical seawalls and steep rocky bluffs.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird rookeries(03-09): rocky headlands, offshore rocks, and seastacks shelter Pelagic Cormorant, Pigeon Guillemot, Osprey(CSC)(01-12).

B. Fish: Anadromous fish: Coho salmon(FPT) and Steelhead trout(FSS):

- spawning runs(09-06)
- juveniles/smolts(02-08)

Striped Surfperch nursery. Extensive areas of Surfgrass along vertical seawalls on northern side of entrance bay. Eelgrass and associated communities in estuary

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg  
Ca St. Parks, Mendocino Dist HQ,  
Mendocino County Sheriff's Dept. (24 hr.)  
Ca DFG - OSPR Dispatch (24 hr.)

(707) 964-9078  
(707) 937-5804  
(707) 463-4086  
(916) 445-0045

# INLET SKETCH MAP

ALBION RIVER

Inlet Name INLET, CA.

Recorder(s) MDH/TMM

Date/Time 11/20/1992, 1130

Tide Stage High (1026 (4.3)) POINT AREA

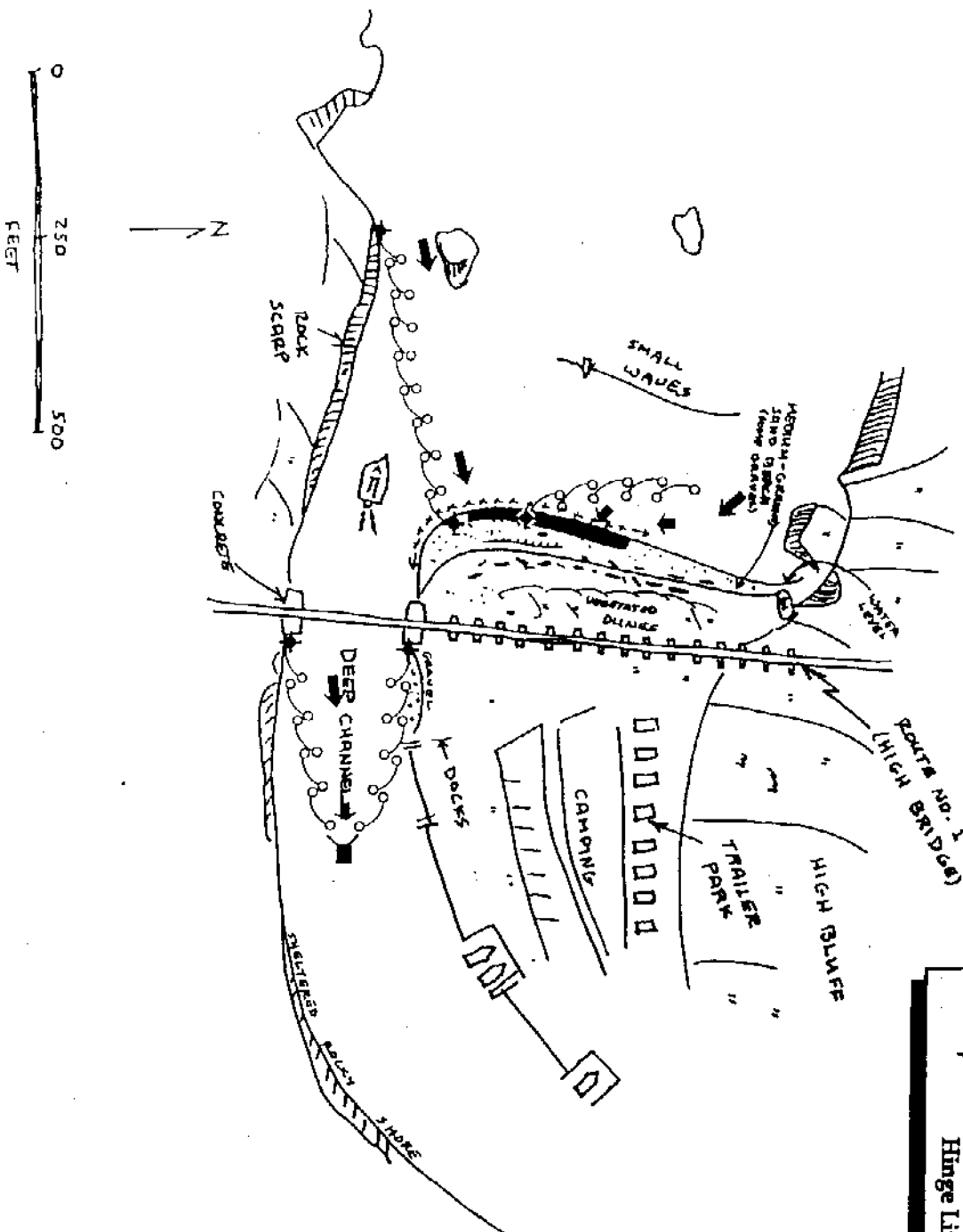
Inlet Classification B

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

- XXXXXXX—
- Recommended Oil-Catchment Area
- ✓
- ✓
- Salt-Water Marsh
- Fresh-Water Marsh
- →
- High-Tide Overwash Zone
- ~~~~~
- Last High-Tide Swash Line



## POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- ⌢ Skimmer Placement
- ✦ Anchor Point / Hinge Line

## SITE SUMMARY SHEET

**SITE:** A-1-087 Salmon Point and Big Salmon Creek

**OSPR Map #:** 033-034

**County:** Mendocino

**Lat:** 39 12' 30" N

**USGS 7.5' Quad. name:** Albion

**Long:** 123 46' 30" W

**NOAA Chart:** 18626

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101 at Cloverdale, take state hwy 128 to state hwy 1 at the mouth of the Navarro River. Go south on Hwy 1 to MP 43.50 (north end of Salmon Creek bridge) and turn west on Spring Grove Rd (county route 401). Proceed downhill to residences along creek mouth (about 2 miles).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky bluffs, offshore rocks, and tidal inlet to Big Salmon Creek. Fine to medium grained sandy beach on the northside of the creek. Fringing marsh within Big Salmon Creek.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Seabirds, Shorebirds, Waterfowl, Raptors Colonies primarily Pelagic Cormorant, Pigeon Guillemot, Black Oystercatchers, Western Gulls. The small marsh is visited by foraging shorebirds and waterfowl e.g. Mergansers and Grebes. California Brown Pelican (FE, SE) (04-11), Osprey (CSC) (01-12), Canadian Geese (note: Aleutian Strain FE, SE).

B. Fish: Anadromous salmonids: Coho salmon (FPT) and Steelhead trout (FSS):

- spawning runs (09-06)
- juveniles/smolts (02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca Dept. of Fish and Game, Fort Bragg  
Mendocino County Sheriff's Dept. (24 hr.)  
Ca DFG - OSPR Dispatch (24 hr.)

(707) 964-9078  
(707) 463-4086  
(916) 445-0045

# INLET SKETCH MAP

BIG SALMON CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/THH

Date/Time 11 NOV. 1972; 1045

Tide Stage High (1026 L.W. 3); 1026

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

—xxxxxxx—

Recommended  
Oil-Catchment Area

⌋

Salt-Water Marsh



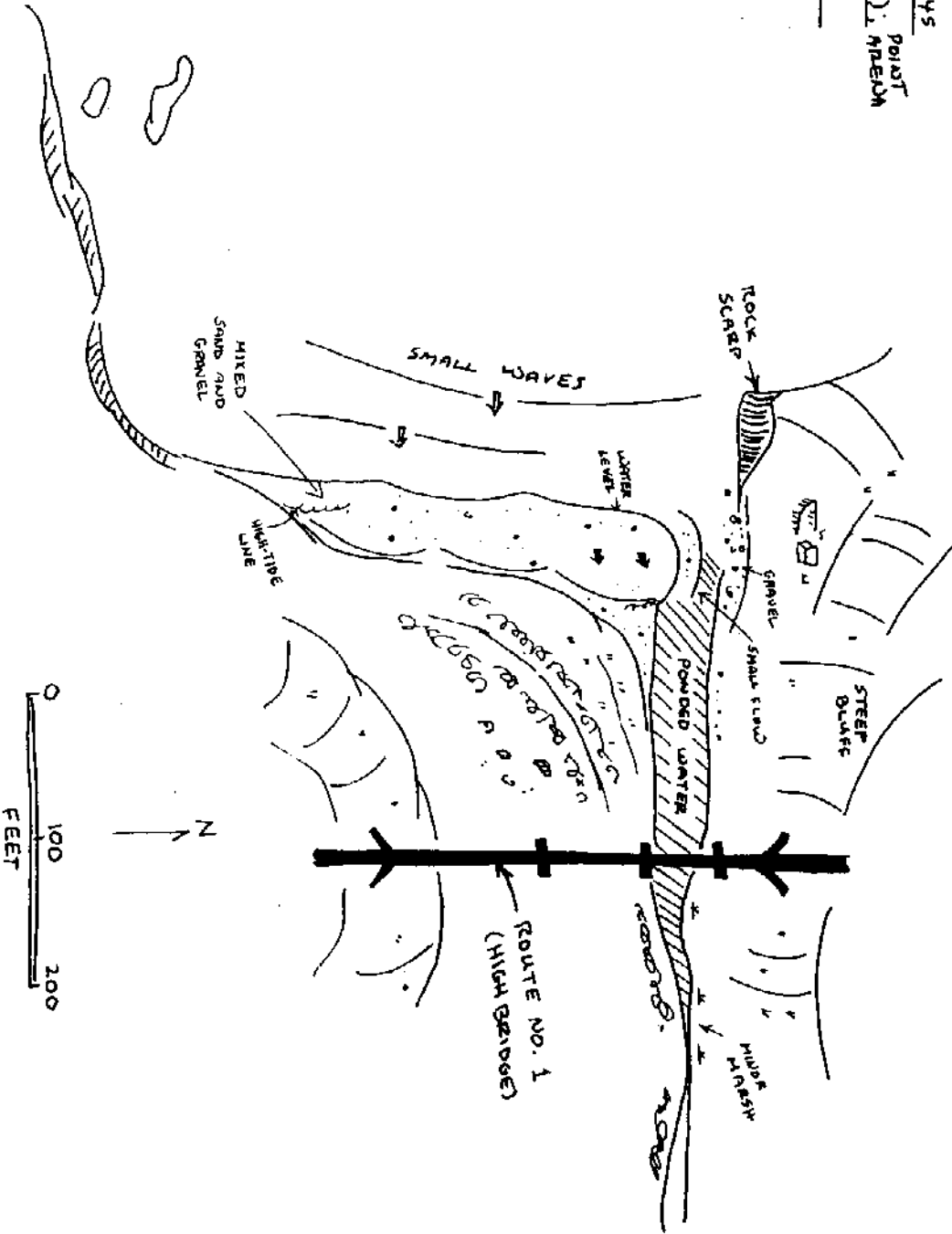
Fresh-Water Marsh



High-Tide  
Overwash Zone



Last High-Tide  
Swash Line



## SITE SUMMARY SHEET

**SITE:** A-1-088 Navarro River St Pk

**OSPR Map #:** 033-034

**County:** Mendocino

**Lat:** 39 11'30" N

**USGS 7.5' Quad. name:** Albion

**Long:** 123 45'30" W

**NOAA Chart:** 18626

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 to State Route 128 just north of Cloverdale. Follow State Route 128 to State hwy 1. After crossing the Navarro River Bridge, go west at M.P. 40.15 (Navarro Bluff road).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet with a well-developed marsh system in the estuary.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Shorebirds, Seabirds, Wading birds, Waterfowl,  
12). Ca. Brown Pelican(FE,SE)(04-11)

Raptors incl. Osprey(CSC)(01-

B. Fish: Anadromous salmonids: Coho salmon(FPT) and

Steelhead trout:

- spawning runs(09-06)

- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg

(707) 964-9078

Greg Grantham, College of the Redwoods

(707) 961-1001

Ca. State Parks, Mendocino Dist. HQ

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## NAVARRO RIVER

1

**F**

21

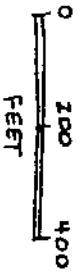
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## SITE SUMMARY SHEET

**SITE:** A-1-089 Greenwood Creek to Cuffey's Cove

**OSPR Map #:** 033-034

**County:** Mendocino

**USGS 7.5' Quad. name:** Elk

**NOAA Chart:** 18626

**Lat:** 39 08'30" N

**Long:** 123 44'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 to State Route 128 just north of Cloverdale. Follow State Route 128 to Greenwood Road just north of Philo. Follow Greenwood Road to state Hwy 1. Turn Rt. and enter town of Elk. Access to the mouth of Greenwood Creek is by trail from the parking lot across from the Elk General Store on Hwy 1. The trail has been accessed by heavy machinery and could be quickly improved to allow access by heavy equipment, again. Foot access by St. Anthony's Beach and Harbor House Beach by private foot trail

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky headlands, offshore rocks, and seasonal inlet to Greenwood Creek with small pockets of fringing marsh behind the beach.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: seabird colonies of primarily Pelagic Cormorant, birds.

Pigeon Guillemot. Coastal shore-

B. Marine Mammals: Pacific Harbor Seal haul-out area.

C. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout:

- spawning runs(09-06)

- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg

(707) 964-9078

Greg Grantham, College of the Redwoods

(707) 961-1001

Ca. State Parks, Mendocino District HQ

(707) 937-5804

National Marine Fisheries Service, Joe Cordaro

(310) 980-4017

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045



# INLET SKETCH MAP

GREENWOOD CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/TMH

Date/Time 11 NOV. 1992, 0900

Tide Stage HIGH @ 1026 (7L-3), <sup>TOLDT</sup> ARCANIA

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

—xxxxxxx—

Recommended  
Oil-Catchment Area

⌋ ⌋

Salt-Water Marsh

⌋

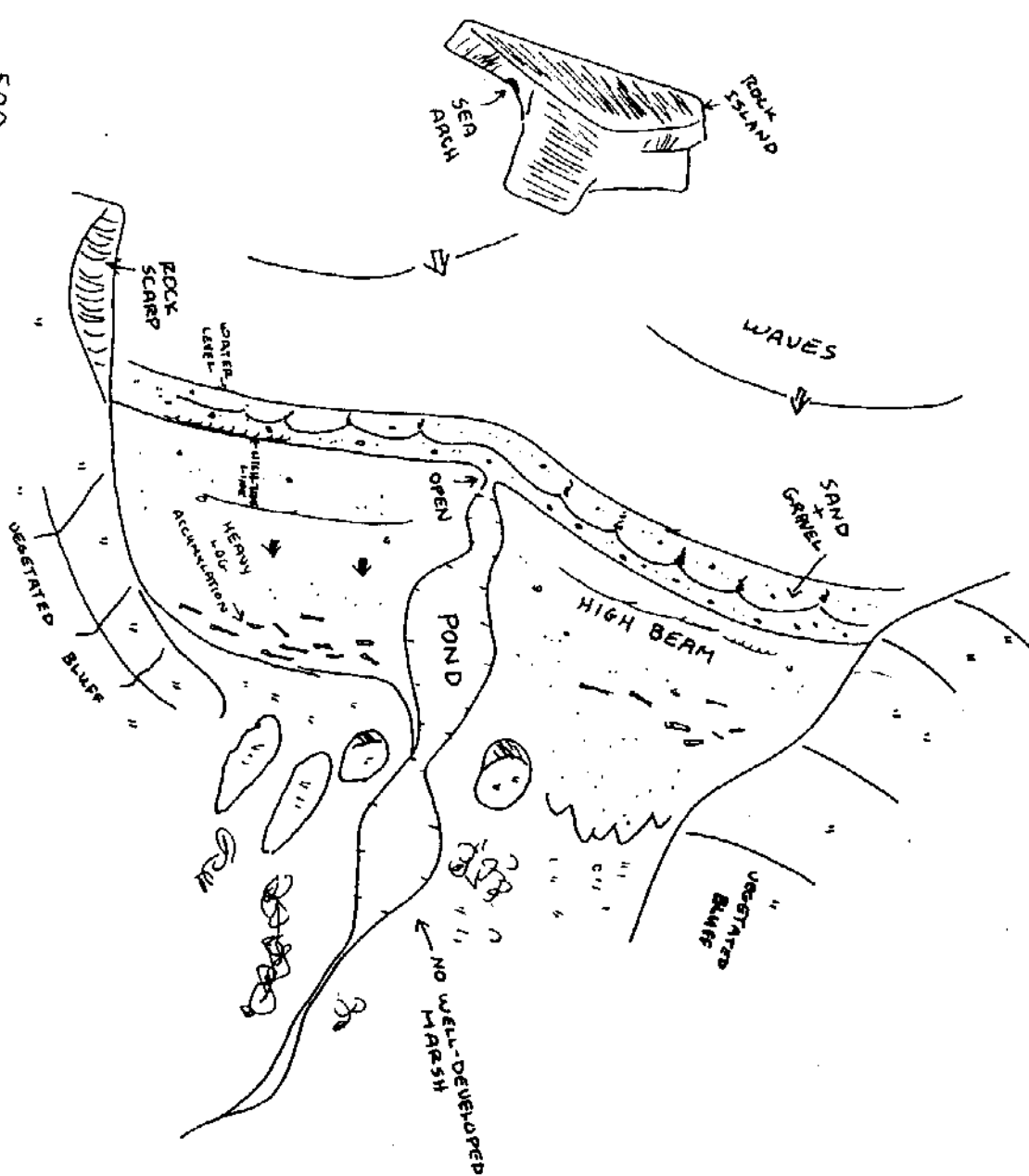
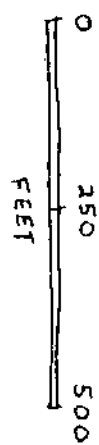
Fresh-Water Marsh

→ →

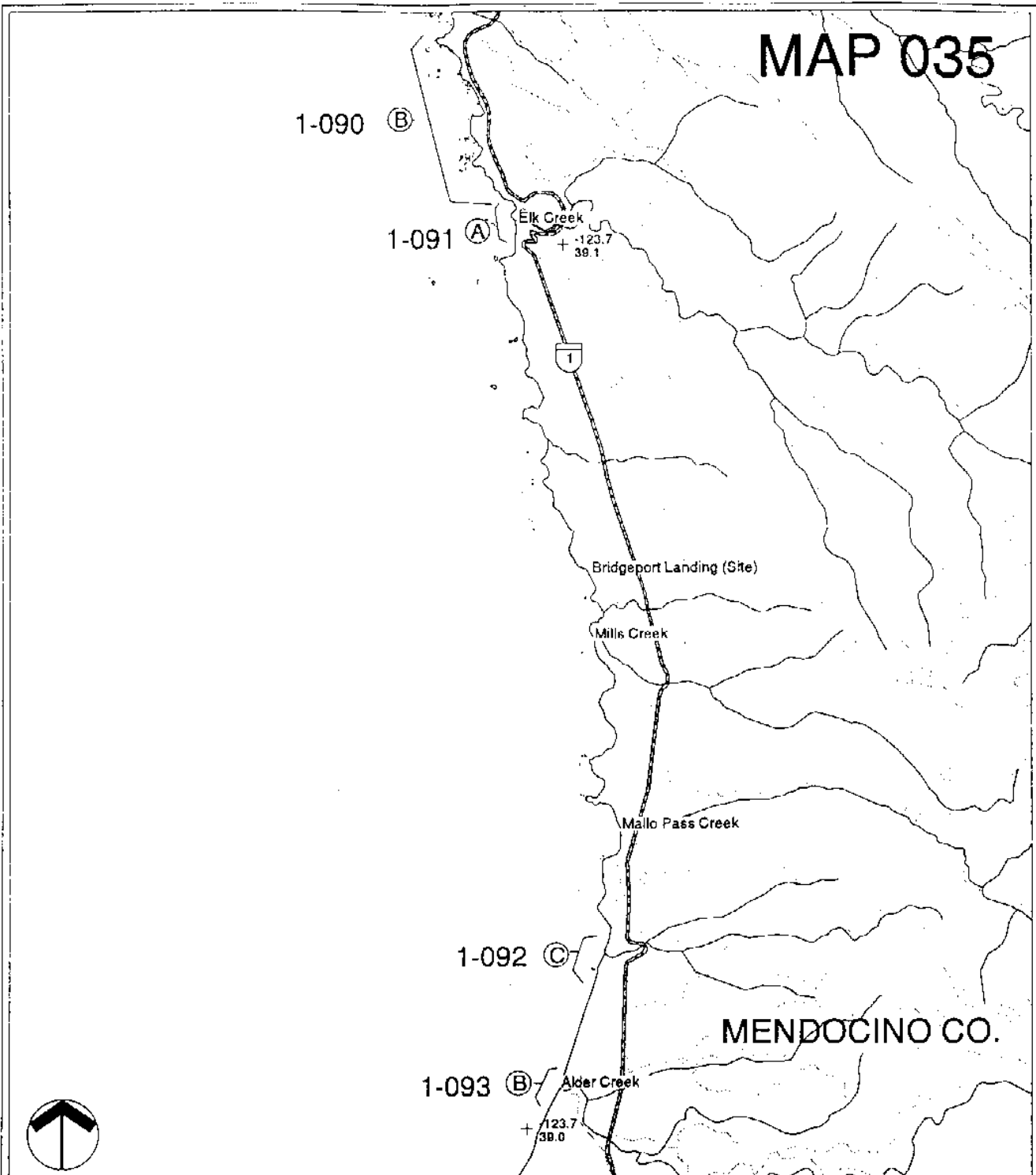
High-Tide  
Overwash Zone

~~~~~

Last High-Tide  
Swash Line



# MAP 035

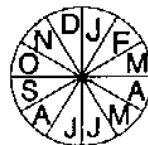


## ENVIRONMENTAL SENSITIVITY RANKING



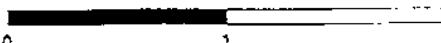
- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



SEASONALITY

SCALE = 1:54179

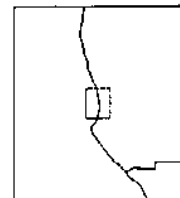


ALBERS PROJECTION, NORTH AMERICAN DATUM OF 1927

E-V-205

change #1

## INDEX MAP



This map includes USGS quad sheets of Mallo Pass Creek

The comparable NOAA nautical chart is "Point Arena to Trinidad Head"

## SITE SUMMARY SHEET

**SITE:** B-1-090 Bonee Gulch

**OSPR Map #:** 035

**County:** Mendocino

**USGS 7.5' Quad. name:** Mallo Pass Ck

**NOAA Chart:** 18620, 18626

**Lat/Long:** 39 06'/123 42'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 to State Route 128 just north of Cloverdale. Follow State Route 128 to State hwy 1. Bonee Gulch is south of Greenwood Creek/Cuffey's Cove area just off of State hwy 1. This site has no access. See General Site Description below.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky bluffs and offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: seabird colonies of primarily Brandt's and Pelagic Cormorants - >100 pairs of nesting birds

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg

(707) 964-9078

Greg Grantham, College of the Redwoods

(707) 961-1001

Ca. State Parks, Mendocino District HQ

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-091 Elk Creek

**OSPR Map #:** 035

**County:** Mendocino

**USGS 7.5' Quad. name:** Mallo Pass Ck

**NOAA Chart:** 18620

**Lat/Long:** 39 06'/123 42'30"

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 to State Route 128 just north of Cloverdale. Follow State Route 128 to Greenwood Road just north of Philo. Follow Greenwood Road to State hwy 1. Go south on State hwy 1 to M.P. 31.55. Permission for access through locked gate must be obtained from property owner (see below).

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Inlet to Elk Creek with a marsh system along margins of the channel.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Extensive marsh system. Seabirds, Shorebirds, Waterfowl.

B. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout(FSS):

- spawning runs(09-06)

- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg

(707) 964-9078

Greg Grantham, College of the Redwoods

(707) 961-1001

Ca. State Parks, Mendocino District HQ

(707) 937-5804

Property owner

(707) 877-3360

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

# INLET SKETCH MAP

ELK CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 11 NOV. 1992; 0800

Tide Stage HIGH (10.26 (+6.3)) Point ARENA

Inlet Classification C

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

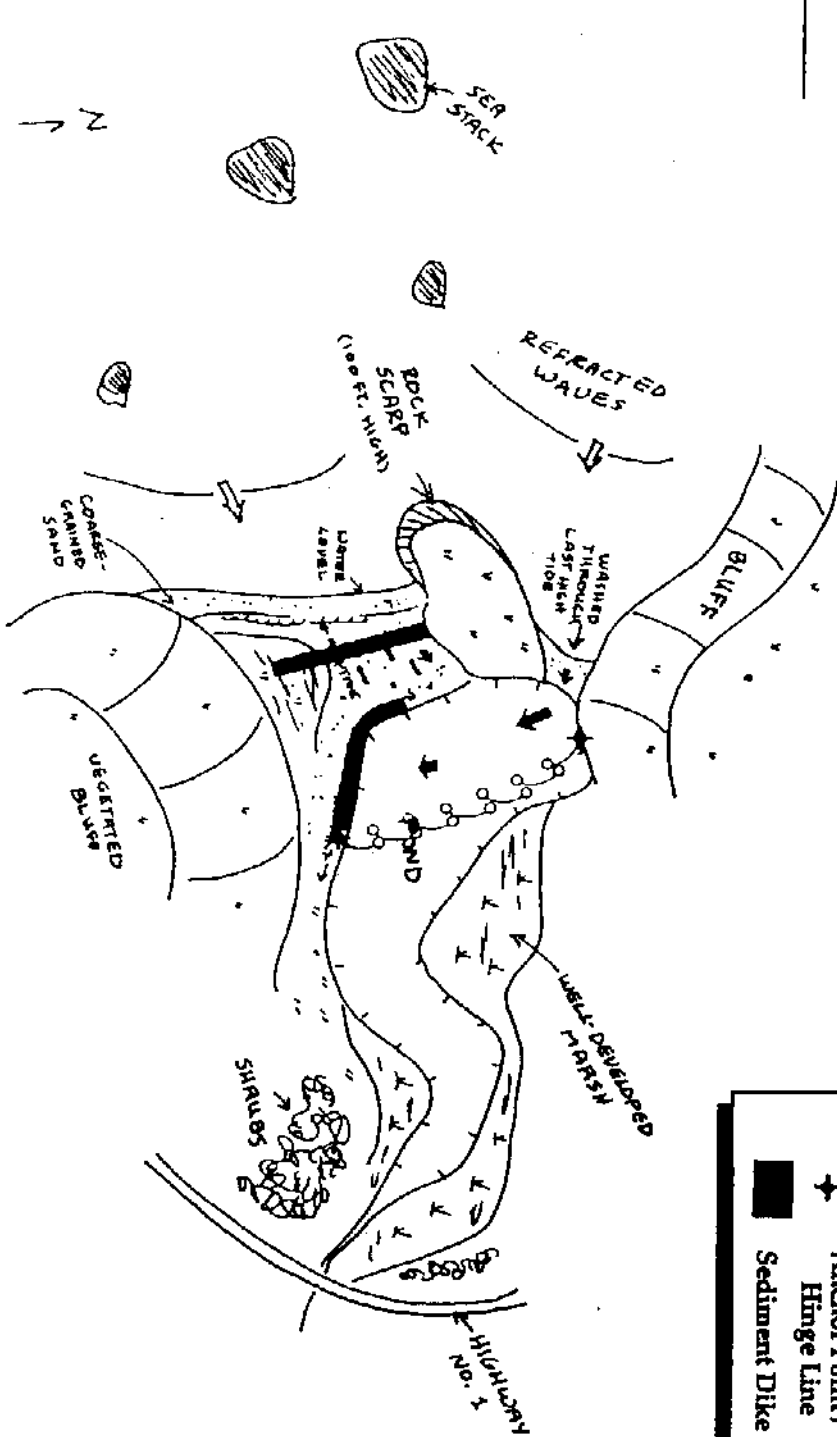
xxxxxxx  
Recommended  
Oil-Catchment Area

~ ~ ~  
Salt-Water Marsh

~ ~ ~  
Fresh-Water Marsh

→ →  
High-Tide  
Overwash Zone

~ ~ ~  
Last High-Tide  
Swash Line



**POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)**

- Path Of Oil
- Deflection Boom
- Oil On Shoreline
- + Anchor Point / Hinge Line
- Sediment Dike

## SITE SUMMARY SHEET

**SITE:** C-1-092 Irish Gulch

**OSPR Map #:** 035

**County:** Mendocino

**USGS 7.5' Quad. name:** Mallo Pass Ck

**NOAA Chart:** 18620

**Lat:** 39 01'30" N

**Long:** 123 41'30" W

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. hwy 101 north to State Route 128 just north of Cloverdale. Follow State Route 128 to Mountain View Road at Boonville. Go left on Mountain View Road and follow to State hwy 1. Go north on State hwy 1. Exit W. from Hwy 1 at MP 25.47, onto a very narrow single lane road with sharp switchbacks. Exit the beach (road is marked) along a similar road that tends to have fewer turns. The exit is at MP 25.57. The exit road would serve as an access road for a F.E. loader or bulldozer. The access road is gated and a key must be obtained from Irish Gulch Vacation Rentals (Mr. William Moores) at about MP 25.37.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal inlet to Irish Gulch.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Shorebirds, Seabirds, Raptors

**ARCHAEOLOGICAL CONCERNS:** \_\_\_\_\_

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                           |                |
|-------------------------------------------|----------------|
| Ca. DFG, Fort Bragg                       | (707) 964-9078 |
| Greg Grantham, College of the Redwoods    | (707) 961-1001 |
| Ca. State Parks, Mendocino District HQ    | (707) 937-5804 |
| Gordon Moores, Vacation Rentals Office    | (707) 882-2467 |
| Mendocino County Sheriff's Dept. (24 hr.) | (707) 463-4086 |
| Ca DFG - OSPR Dispatch (24 hr.)           | (916) 445-0045 |

## **SITE SUMMARY SHEET-OPA90**

**SITE:** B-1-093 Alder Creek

**OSPR Map #:** 035

**County:** Mendocino

**Lat/Long:** 39 00'30"/123 42'

**USGS 7.5' Quad. name:** Mallo Pass

**Rev:** 07/01/96

**NOAA Chart:** 18640

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to state route 128 just N. of Cloverdale. Follow state route 128 to Mountain View Road and follow to state Hwy 1. Go N. on Hwy 1 and take the first road S. of Alder Creek Bridge (MP 22.50). Follow road about 1 mile to creek mouth. Either side of creek easily accessible by heavy machinery.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Seasonal inlet to Alder Creek with a small marsh along the creek. San Andreas Fault is on this area and runs into the ocean.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Seabirds, Shorebirds, Waterfowl, Wading birds juvenile gulls, Caspian Terns.

B. Fish: Anadromous salmonids: Coho salmon(FPT) and Steelhead trout:

- spawning runs(09-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

|                                           |                |
|-------------------------------------------|----------------|
| Ca. DFG, Fort Bragg                       | (707) 964-9078 |
| Ca. State Parks, Mendocino Dist. HQ       | (707) 937-5804 |
| College of the Redwoods, Greg Grantham    | (707) 961-1001 |
| Mendocino County Sheriff's Dept. (24 hr.) | (707) 463-4086 |
| Ca DFG - OSPR Dispatch (24 hr.)           | (916) 445-0045 |

# INLET SKETCH MAP

ALDER CREEK

Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 11 Nov. 1991, 0700

Tide Stage HIGH @ 1026 (+33); ARENA <sup>POINT</sup>

Inlet Classification D

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

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Recommended  
Oil-Catchment Area

∩ ∩

Salt-Water Marsh

~ ~ ~

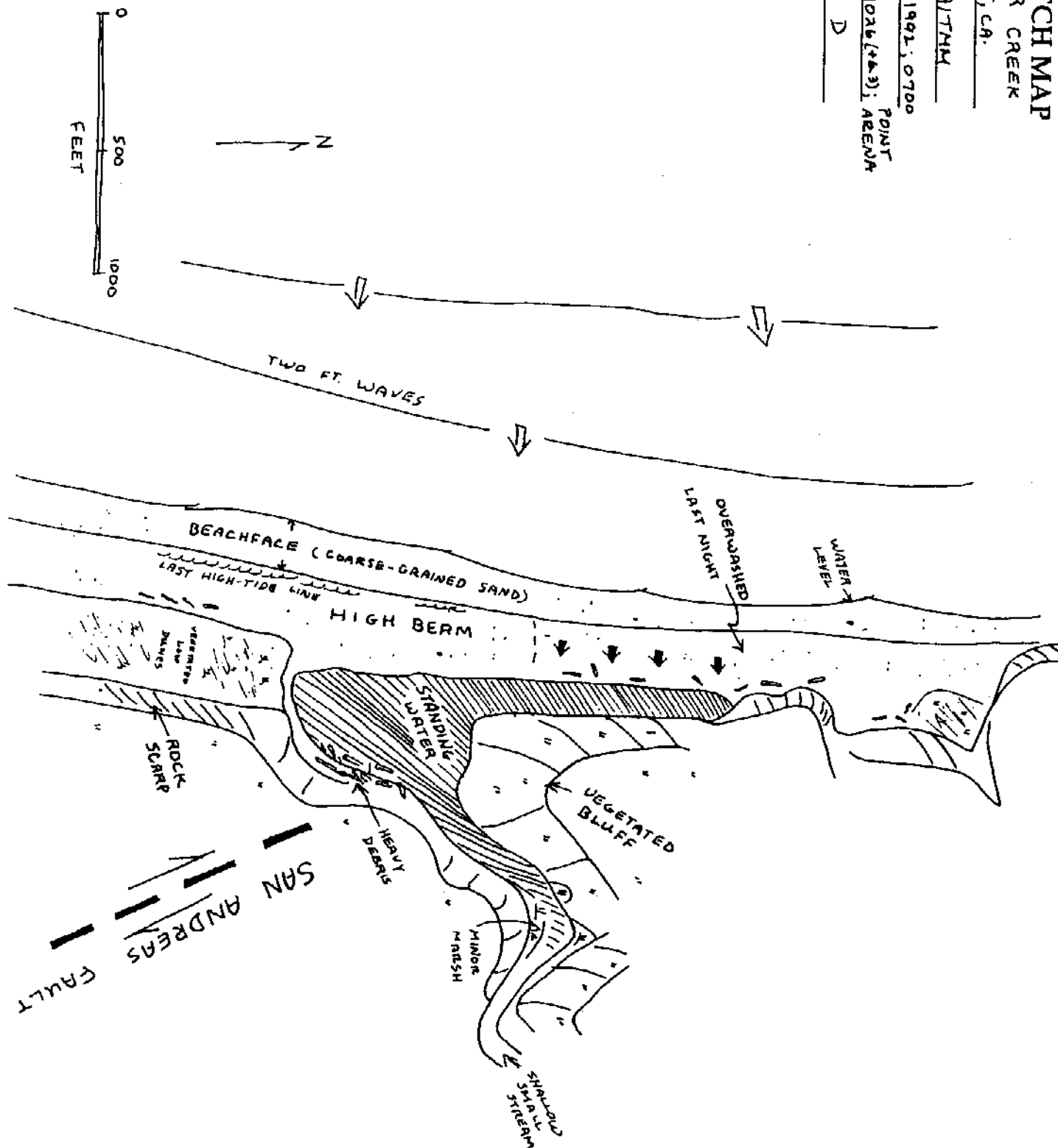
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

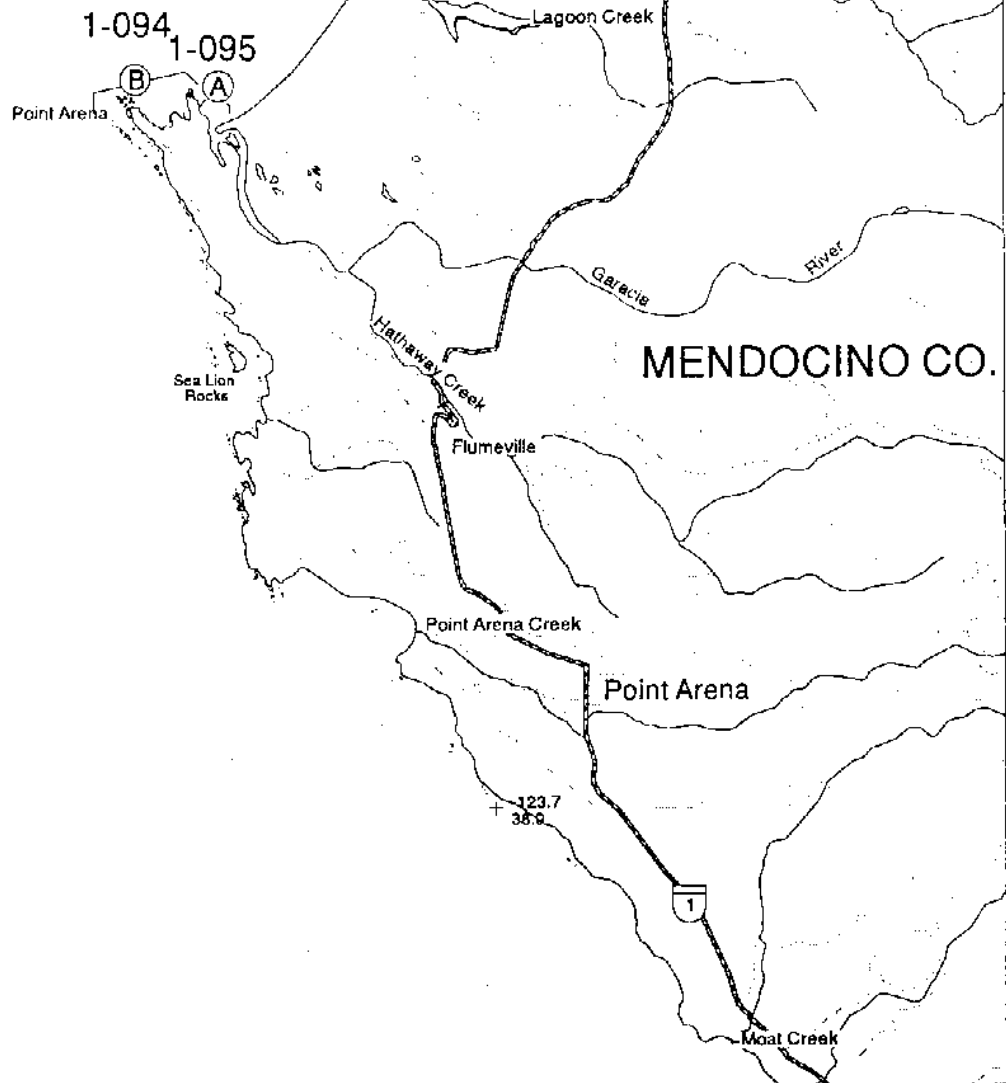
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Last High-Tide  
Swash Line





# MAP 036

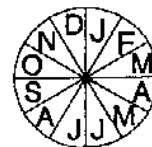


## ENVIRONMENTAL SENSITIVITY RANKING



- (A) - First Priority
- (B) - Second Priority
- (C) - Third Priority

Last Update July, 1993



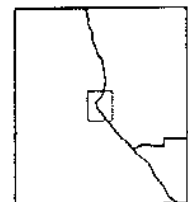
SEASONALITY

SCALE = 1:52113

0 1 2 MILES  
ALBERS PROJECTION - NORTH AMERICAN DATUM OF 1927

E-V-215 Change #1

## INDEX MAP



This map includes USGS quad sheets of Point Arena

The comparable NOAA nautical chart is "SF to Point Arena"

## SITE SUMMARY SHEET

**SITE:** B-1-094 Point Arena

**OSPR Map #:** 036

**County:** Mendocino

**Lat/Long:** 38 57'30"/123 44'

**USGS 7.5' Quad. name:** Mendocino

**Rev:** 07/01/96

**NOAA Chart:** 18640

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

Take U.S. Hwy 101 N. to state route 128 just N. of Cloverdale. Follow state route 128 to Mountain View Road and follow to state Hwy 1. Go S. on Hwy 1 Turn right onto Lighthouse Road. This road runs along the bluffs near the ocean. Beach access is not possible. The Lighthouse grounds area open from 11:00 to 14:30. Check the Coastal Resource Guide for contacts to access grounds at other times.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Rocky headlands and offshore rocks.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Seabird colonies primarily Pigeon Guillemots and Pelagic Cormorants.

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg

(707) 964-9078

Ca. State Parks, Mendocino Dist. HQ

(707) 937-5804

College of the Redwoods, Greg Grantham

(707) 937-5804

Mendocino County Sheriff's Dept. (24 hr.)

(707) 463-4086

Ca DFG - OSPR Dispatch (24 hr.)

(916) 445-0045

## SITE SUMMARY SHEET

**SITE:** A-1-095 **Garcia River and Manchester State Beach.** **OSPR Map #:** 036

**County:** Mendocino

**USGS 7.5' Quad. name:** Point Arena

**NOAA Chart:** 18640

**Lat/Long:** 38 57'30"/123 44'

**Rev:** 07/01/96

**DIRECTIONS TO SITE AND ACCESS INFORMATION:** (Hwy no., street name, foot, vehicles, 4WD, Heavy equipment, Boats, permits, phone no's, etc.)

From U.S. Hwy 101, go North to State Hwy 128, just N. of Cloverdale. Follow state Hwy 128 to Mountain View Road in Boonville. Go west (left turn) on Mountain View Road to state Hwy 1. Go South on state hwy 1 to Stoneboro Rd (note coastal access sign at intersection) and turn west. Continue to parking lot. Continue on foot, across dunes, to beach. Walk south on the beach (appx 1 mile) to the mouth of the Garcia River.

To get to Hunters Lagoon, walk north on the beach for about 0.5 miles from the parking lot on Stoneboro Road.

To get to Brush Creek, take Kinney road (about .5 miles north of the town of Manchester) west from state hwy 1 to it's end near the beach. Walk across the dunes to the creek.

To get to Davis Lake, go west from state hwy 1 on the same access road as Alder Creek (B-1-093). Immediately after exiting state hwy 1, note a south turning (left) road closed by a locked gate. This road leads to Davis Lake, about .5 mile. CSP has a key.

**GENERAL SITE DESCRIPTION:** (habitats/terrain, dominant substrate types, exposure, quantity & quality of debris, presence of oil, oceanographic data, facilities, etc.)

Tidal inlet to the Garcia River and seasonal tidal inlets to Brush Creek, Hunters Lagoon, and Davis Lake. About 1.5 miles of sandy beach ranging from fine to coarse.

**BIOLOGICAL CONCERNS:** (Species, Seasons or month, Condition - eg breeding, nesting, haulout, etc.)

A. Birds: Seabirds, Shorebirds, Waterfowl Caspian Terns, Pelagic Cormorants, Black Oyster Catchers, Pigeon Guillemots.

B. Fish: Tidewater Gobies (FE) (1-12) have been noted in Hunters Lagoon. Anadromous salmonids: Coho salmon(FPT) and Steelhead trout(FSS):

- spawning runs(09-06)
- juveniles/smolts(02-08)

**ARCHAEOLOGICAL CONCERNS:**

**TRUSTEE AGENCY/MANAGER AND LOCAL EXPERTS:**

Ca. DFG, Fort Bragg	(707) 964-9078
Ca. State Parks, Mendocino Dist. HQ	(707) 937-5804
Mendocino County Sheriff's Dept. (24 hr.)	(707) 463-4086
Ca DFG - OSPR Dispatch (24 hr.)	(916) 445-0045
College of the Redwood, Greg Grantham	(707) 961-1001

# INLET SKETCH MAP

GARCIA RIVER

Inlet Name INLET, CA.

Recorder(s) MOH/TMM

Date/Time 10 Nov. 1992, 1720

Tide Stage LOW (01654 (-0.6)); POINT ARENA

Inlet Classification C

## CHECKLIST

- ☒ North Arrow
- ☒ Scale
- ☒ High-Tide Line
- ☒ Low-Tide Line
- ☒ Substrate Type

## LEGEND

—XXXXXXX—

Recommended  
Oil-Catchment Area

✓ ✓

Salt-Water Marsh

§

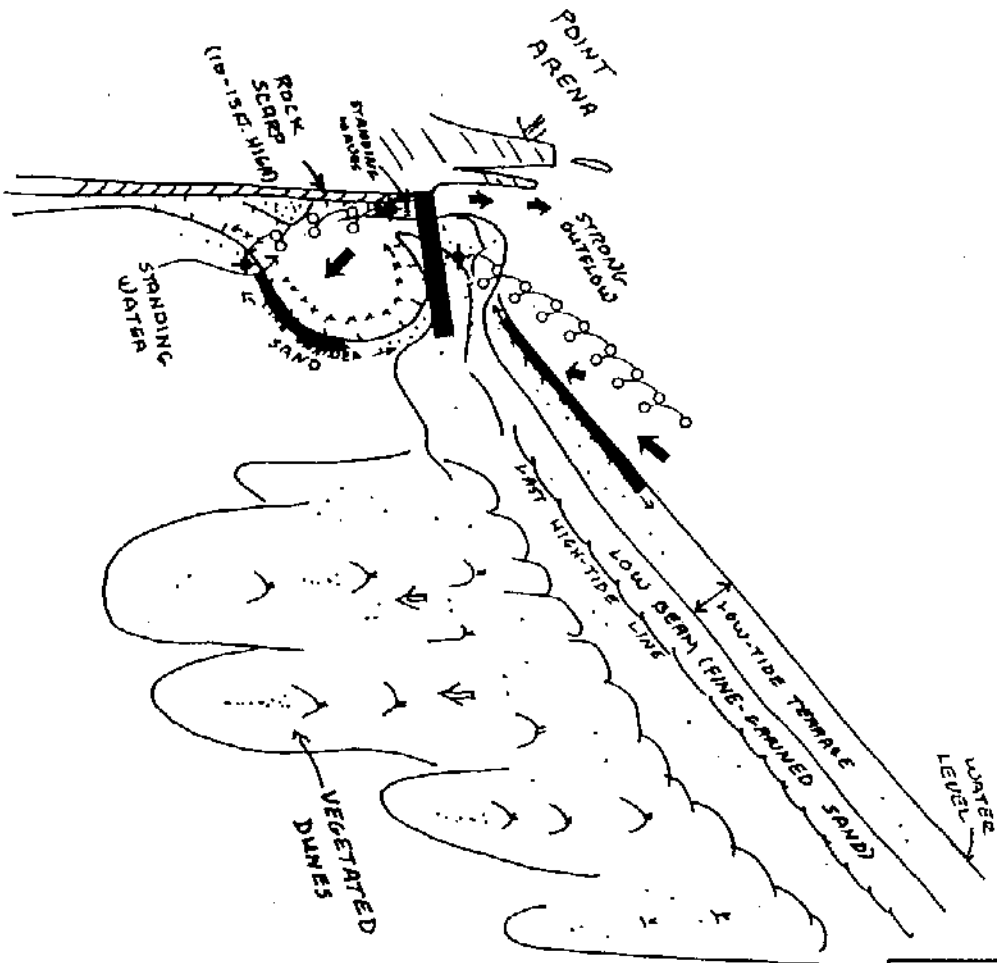
Fresh-Water Marsh

→ →

High-Tide  
Overwash Zone

~~~~~

Last High-Tide



## POTENTIAL PROTECTION STRATEGY (FLOOD TIDE)

- Path Of Oil
- o Deflection Boom
- Oil On Shoreline
- + Anchor Point /  
Hinge Line
- Sediment Dike

N

0 500 1000  
FEET

# ANNEX E

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## **TAB B ECONOMICALLY SIGNIFICANT SITES**

The primary purpose of Tabs A through C is to identify and incorporate into emergency response planning, the specific resources subject to injury or damages from an oil spill event. Tab B contains information that identifies through lists, tables, maps, and text, many of the economic resources that face potential damages due to an oil spill. Limitations of time, personnel, and the availability of information suggests that all resources of significant economic value and susceptible to marine oil spills, could not be identified at this time.

People involved with response planning recognize that throughout California marine waters, along the State's shoreline, and within coastal communities there are many resources of economic importance that could be severely impacted by an oil spill incident. This Area Contingency Plan will be revised or updated periodically and additional information on sensitive areas or resources is both welcome and needed to assist oil spill response planning.

### **Relation to Environmentally Sensitive Areas in Tab A**

Tab A contains maps and site summary sheets with information about the environmental sensitivity of specific locations within the planning area. State and Federal law establish three priority levels for dedication of emergency oil spill response resources.

First Priority - Protection of human health and safety

Second Priority - Protection of environmental resources

Third Priority - Protection of economic resources

Examples of resources that will receive a first priority response (human health and safety) includes:

- power plant intakes      - desalinization plants
- drinking water intakes      - other health/safety intakes
- public use areas at risk (e.g. fire department) (e.g. hazardous fumes)

Environmentally sensitive sites are designated as the second priority for oil spill response resources. Environmental sites are categorized in Tab A using a scale of A, B, and C. Sites ranked with an A are the most sensitive to an oil spill.

### **Economically Sensitive Areas**

Strictly economic resources are designated as the third priority for dedication of oil spill response resources, following human health and safety and environmental resources. The economic sites are ranked using a continuation of the environmental scale with D, E, and F categories. Economic resources that have a greater potential for long-term damages receive a higher rank or priority for emergency response.

Response planners recognize that marine resources can have environmental, economic, and cultural or historical importance, such as coastal parks or important fishing areas. In these cases, the higher environmental ranking would be used for response planning. The need to set priorities for protection will occur only when response equipment or resources are inadequate to handle a given spill volume.

The Area Contingency Plan is a planning document intended to assist oil spill response personnel during actual response activities and with prespill planning. The Unified Command requires flexibility in planning response activities. This flexibility is necessary to provide the most appropriate response to a given spill event.

#### Criteria for Priority Response and Types of Economic Resources

The following criteria or definitions are used to categorize economic resources in terms of priority for response:

- D - Economic activities and resources which require high water quality for their operations or existence. Resources that fall into this category would face severe, long-term economic impacts from a spill. This category includes commercial fishing areas (also have environmental rank), aquaculture and mariculture areas, marine labs, salt pond intakes, aquarium water intakes, etc.
- E - Facilities, businesses, or resources which directly use coastal or bay waters within their economic activity and which are at risk of oiling from a spill in marine waters. The resources falling into this category would face significant disruption of their activity, but shorter term potential damages from oiling than resources in the ~D~ category. This category would include resources such as marinas, harbors, commercial piers, industrial intakes, and parks or recreational areas.
- F - This category contains marine associated facilities, businesses and resources. These resources would face economic impacts from a marine spill, but do not depend directly on marine water for their economic base. Resources in this category will tend to face less severe damages than those identified in categories D or E. This category includes economic resources such as waterfront hotels, restaurants, shops, and residential areas. (Note: residential sites would be evacuated to avoid health risks).

#### Types of Economically Significant Resources and *Ranking*

Listed below are various types of significant economic resources potentially at risk from oiling and the appropriate response priority category.

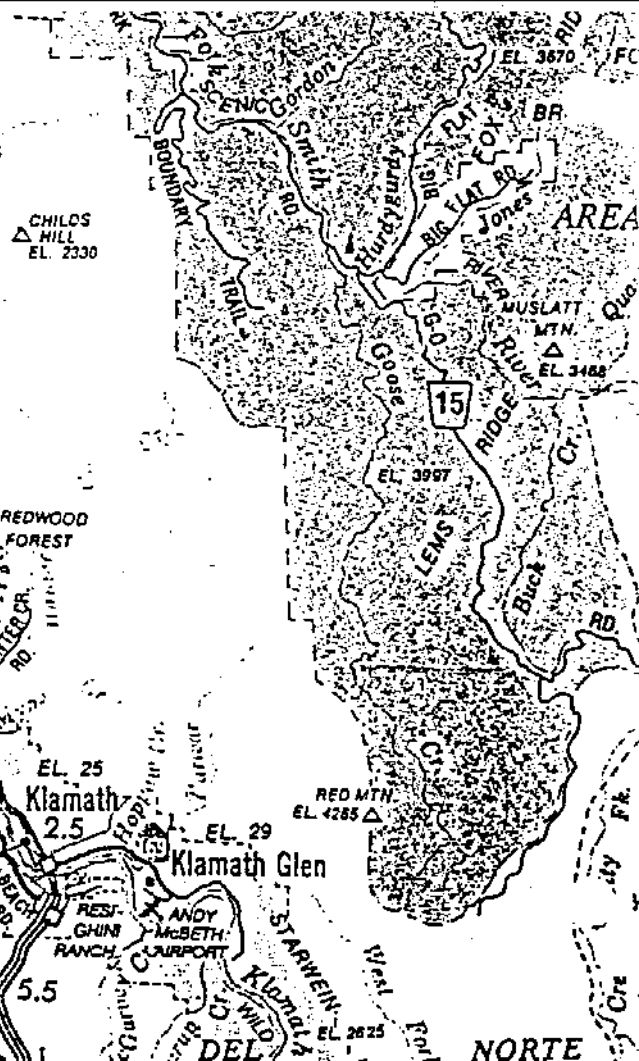
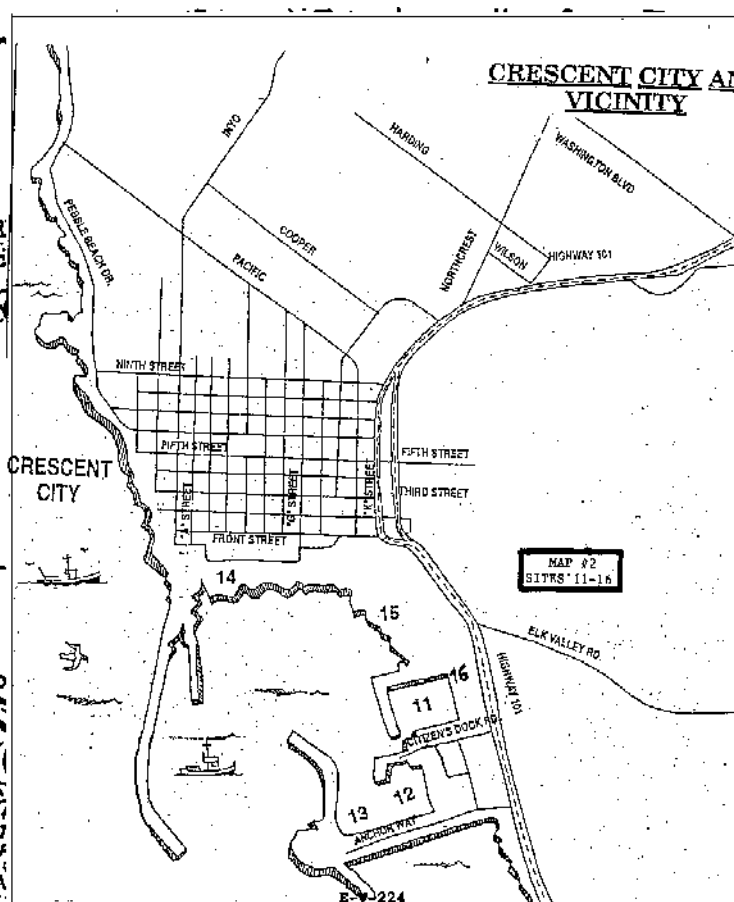
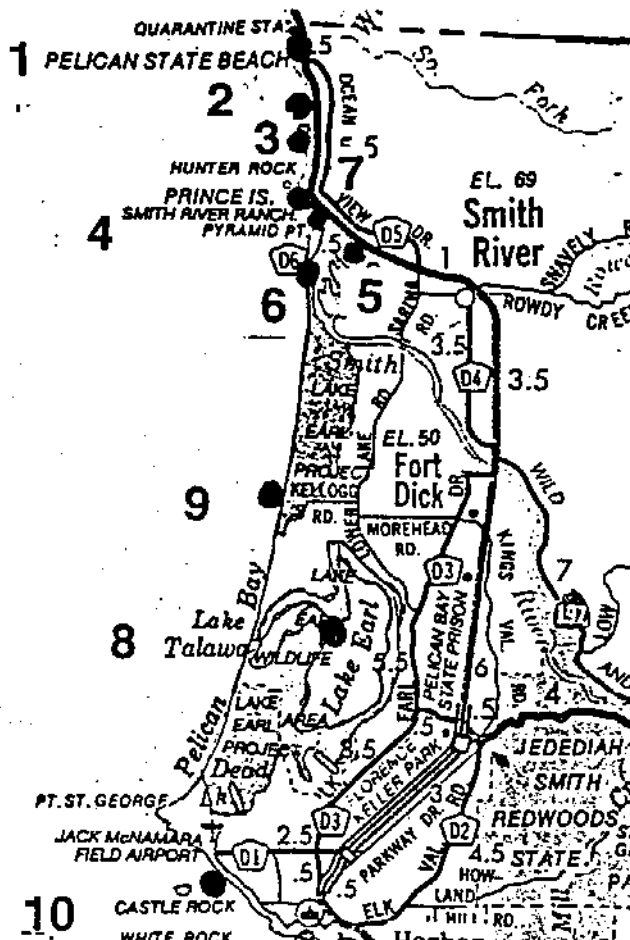
- aquaculture, mariculture (D)
- commercial fishing grounds or areas (D)
- aquariums, marine labs (D)
- acility intakes not affecting public health] (D)
- parks, beaches, recreational areas (E)
- vessel or boat traffic areas: shipping lanes, harbor entrances, river mouths, bays, anchorages (E)
- marinas, houseboat areas (E)
- ferries and tour boats (E)
- port or harbor facilities (E)
- boat moorings, cargo piers, terminals, *fishing* piers (E)
- ship or boat repair shops (E)
- tourist, hotel, restaurant areas (F)
- waterfront residential areas (F)



## Information About Sensitive Economic Resources

Tab B contains lists, charts, and/or maps of sensitive economic areas or resources. Below is a description of the types of information that can be provided for each identified economic resource or facility. Some information is unavailable for specific resources identified within this section.

1. Resource or facility identification number
2. Location of resource or facility
3. Brief description of the resource at risk
4. Contact names and numbers (24 hour access if available)
5. Priority response category



**DEL NORTE COUNTY: ECONOMICALLY SIGNIFICANT SITES**

| <b>SITE<br/>LAT/LONG</b>                                   | <b>LOCATION</b>                                                                                      | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                                                                                                                                                              | <b>CONTACT NAMES/<br/>NUMBER</b>                                                   | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                   |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------|------------------------------------------------------|
| <b>Site 1</b><br>41_59',x41_57',<br>124_13'                | Pelican Beach<br>State Park<br>Mi So of CA/OR<br>Border Via Pave<br>Road                             | 1 Acre Beach Access by<br>Trail, Commercial and Sport<br>Surf Smelt, Perch Fishing<br>Area                                                                                                                      | State Park<br>Ranger's Office<br>(707)464-9533<br>Del Norte Disp.<br>(707)464-4191 | D                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 2</b><br>41_58',<br>124_13'                        | Clifford Kamph<br>County<br>Memorial Park<br>2 Mi So of CA/<br>OR Border                             | Mi Beach Access by Trail<br>Combing and Picnicking/<br>Commercial and Sport Surf<br>Smelt, Perch Fishing Area                                                                                                   | Parks and<br>Recreation<br>Department<br>(707)464-7253                             | D                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 3</b><br>41_57',<br>124_13'                        | Westbrook<br>Residential<br>Subdivision<br>Approx. 1 Mi Below<br>Kamph M.P., Sec<br>Line to Sec Line | Private, Residential,<br>Waterfront, View                                                                                                                                                                       | Reservation<br>Ranch<br>(707)487-3516                                              | F                   | Yes - See<br>Annex F<br>Appendix 1 of<br>County Plan |
| <b>Site 4</b><br>41_57',<br>124_13'                        | Smith River<br>Rancheria<br>Vicinity of Prince<br>Island and Hunter<br>Rock                          | Native American Culture<br>Subsistence Fishing Area/<br>Sport Fishing for Clams and<br>Mussels/ Recreational Area                                                                                               | Tolowa Council<br>Tribal Council<br>(707)487-7055                                  | D                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 5</b><br>41_56',<br>124_13'                        | Ship Ashore Resort<br>and Salmon Harbor<br>Resort<br>12 Mi No of<br>Crescent City Via<br>Highway 101 | Privately Owned, RV Parks<br>and Resort Hotel Support<br>Tourism                                                                                                                                                | Ship Ashore<br>(707)487-3141<br>Salmon Harbor<br>(707)487-3341                     | E                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 6</b><br>41_56',<br>124_13',<br>41_56',<br>124_12' | Smith River Estuary<br>10 Mi No of<br>Crescent City Via<br>Highway 101                               | California Coastal<br>Commission Designated<br>Biologically Sensitive<br>Habitat Area. The Estuary<br>is important to the<br>Maintenance of a Sport and<br>Commercial Fisheries.<br>Drains 720 Sq Mi Watershed. | Del Norte<br>Dispatch<br>(707)464-4191                                             | D                   | No Response<br>Equipment on<br>Site                  |

**DEL NORTE COUNTY: ECONOMICALLY SIGNIFICANT SITES**

| <b>SITE<br/>LAT/LONG</b>                                 | <b>LOCATION</b>                                                                                                                   | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                                                                                                                                                                                                          | <b>CONTACT NAMES/<br/>NUMBER</b>                                                                       | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                               |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------|
| <b>Site 7</b><br>41_56'<br>124_13'                       | Mouth of the Smith<br>River<br>Public Trail Beach<br>Access - End of<br>Mouth of Smith<br>River Road                              | Acres Parking Lot with<br>Access to Waterfront.<br>Several Private Residents<br>in Area of Beach Trail<br>Access                                                                                                                                            | County Parks &<br>Recreation<br>(707)464-7237<br>Del Norte<br>Dispatch<br>(707)464-4191                | E                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 8</b><br>41_50'<br>124_11'<br>41_50'<br>124_13'  | Tolowa/Lake Earl<br>Wetland<br>5 Mi No of Crescent<br>City Via Access<br>Points Off Lake<br>Earl Drive                            | 3,000 Wetland Acres of<br>Critical Wetland Habitat<br>for Fish and Wildlife/<br>Recreational Uses Include<br>Waterfowl, Hunting and<br>Sport Fishing and Sight<br>Seeing. California Coastal<br>Commission Designated<br>Biologically Sensitive<br>Habitat. | State Park<br>Ranger's Office<br>(707)464-9533<br>Del Norte<br>Dispatch<br>(707)464-4191               | D                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 9</b><br>41_56'<br>124_13'<br>41_47'<br>124_17'  | Mouth of the Smith<br>River to Point St.<br>George<br>5 Mi No of CCC Via<br>Kellogg Bch Rd,<br>Then on County<br>Maintenance Road | Commercial and Sport Area<br>for Surf Perch and Surf<br>Smelt/Recreation, Beach<br>Combing Area, Surfing                                                                                                                                                    | State Park<br>Ranger's Office<br>(707)464-9533                                                         | D                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 10</b><br>41_47'<br>124_17'<br>41_44'<br>124_11' | Point St. George to<br>Crescent City<br>Harbor District                                                                           | 3 Mi Long Significant<br>Tourist Attraction,<br>Waterfront Residential Area<br>/Numerous Public Overlook<br>Points and Beach Trail<br>Accesses, Surfing                                                                                                     | City Planning<br>(707)464-9506<br>County Planning<br>(707)464-7253<br>Del Norte Disp.<br>(707)464-4191 | E                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 11</b><br>41_44'9"<br>124_11'8"                  | Inner Boat Basin                                                                                                                  | 300+ slip Commercial Fish-<br>ing Industry Dock Facility/<br>Commercial Herring<br>(Dec-Jan)                                                                                                                                                                | Harbor Master<br>(707)464-6174<br>Del Norte Disp.<br>(707)464-4191                                     | D                   | Yes-CGC Edisto<br>& Harbormaster<br>See Annex F of<br>this plan. |

**DEL NORTE COUNTY: ECONOMICALLY SIGNIFICANT SITES**

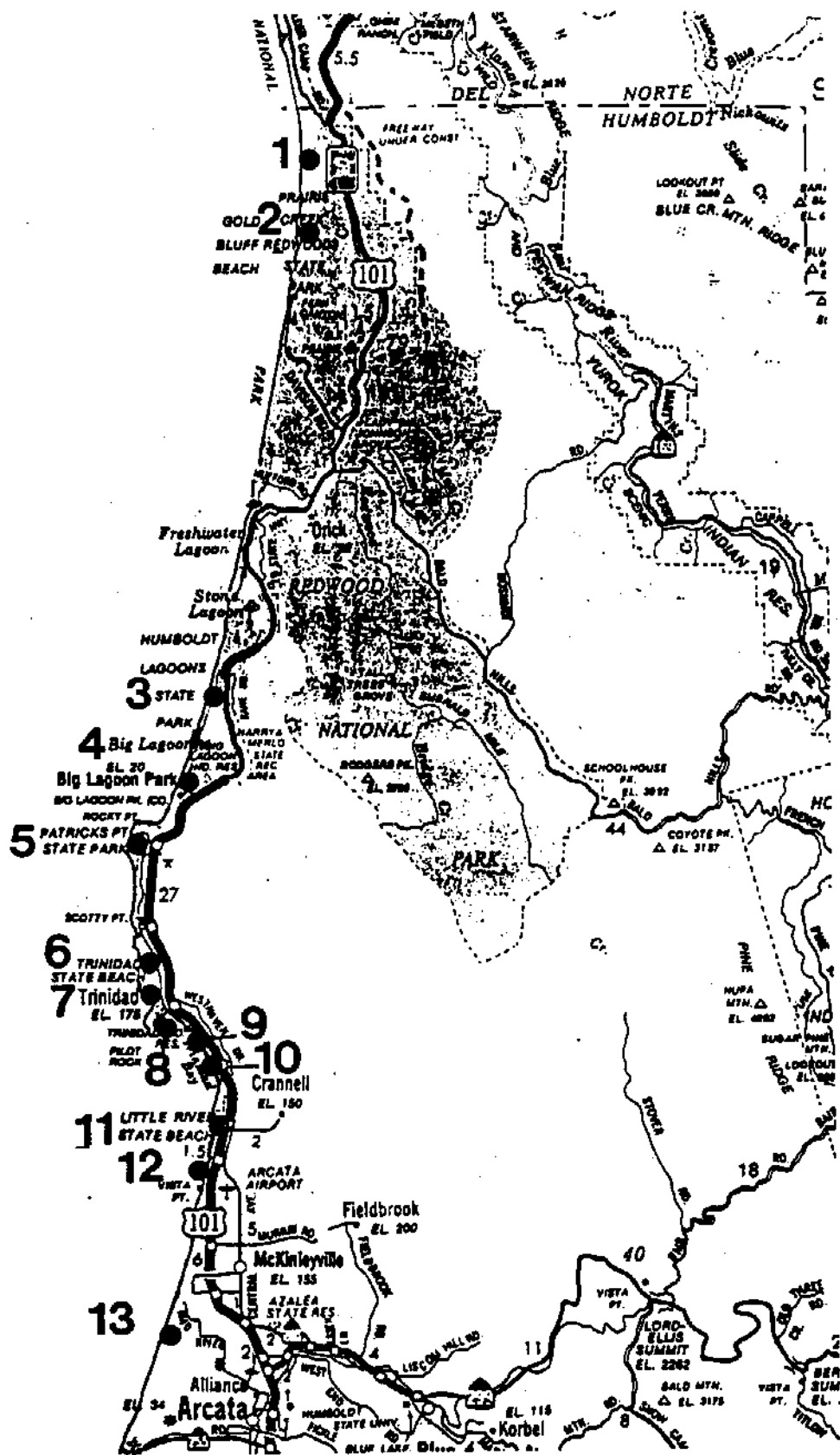
| <b>SITE<br/>LAT/LONG</b>                                      | <b>LOCATION</b>                                                                            | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                                                                                                                                                 | <b>CONTACT NAMES/<br/>NUMBER</b>                                                                       | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                               |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------|
| <b>Site 12</b><br>47°44'30"<br>124°11'                        | Outer Boat Basin                                                                           | Commercial Fisheries Docks/<br>Fish Processing Plants/600<br>Slip Sport Boat Basin/<br>Restaurants, Fishing Piers<br>Tackle Shops, and Boat<br>Repair Shops                                        | Harbor Master<br>(707)464-6174<br>Del Norte Disp.<br>(707)464-4191                                     | D                   | Yes-CGC Edisto<br>& Harbormaster<br>See Annex F of<br>this plan. |
| <b>Site 13</b><br>41°44'30"<br>125°11'10"                     | Abalone<br>International<br>West End of<br>Citizens Dock Road                              | Abalone Mariculture,<br>Approximately 1.1 Acres<br>Used                                                                                                                                            | Chris Van Hook<br>(707)464-6913<br>Harbor Master<br>(707)464-6174                                      | D                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 14</b><br>41°44'9"<br>124°11'50"                      | Beach Front Park @<br>North End of Harbor<br>Via Front Street                              | Mi Waterfront City<br>Maintained Public Park/<br>Waterfront Paved Parking<br>Extensive Lawn Area<br>Commonly Used for<br>Picnicking, Social and<br>Cultural Activities and<br>Events, Wind Surfing | City Planning<br>(707)464-9506<br>Del Norte<br>Dispatcher<br>(707)464-4191                             | E                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 15</b><br>41°45'30"<br>124°11'30"                     | Elk Creek Marsh<br>Northeast Corner of<br>Harbor Area,<br>Drained<br><br>Shoreline RV Park | California Coastal<br>Commission Designated<br>Biologically Sensitive<br>Wetland That is Tidally<br>Influenced Important<br>Wildlife Species,<br>Historical and Cultural<br>Significance           | City Planning<br>(707)464-9506<br>Del Norte<br>Dispatcher<br>(707)464-4191<br>RV Park<br>(707)464-2473 | D                   | No Response<br>Equipment on<br>Site                              |
| <b>Site 16</b><br>41°45'<br>124°11'5"                         | Under Sea World @<br>NE Corner of Inner<br>Basin-water intake                              | Near East of Elk Creek<br>11°44'9" - 124°11'20" Old<br>Pipe 5 Ft Deep Mi Long                                                                                                                      | Owner<br>(707)464-3522                                                                                 | D                   | Yes - A Truck<br>to Transport<br>Water                           |
| <b>Site 17</b><br>41°44'7"<br>124°11'<br>41°42'30"<br>124°09' | South Beach and<br>Enderts Beach<br>West of Hwy 101<br>So of Crescent City<br>Harbor       | Popular 3 Mi Beach Stretch<br>Used as Major Recreational,<br>For Picnicking, Fishing,<br>Surfing, and Clamming,<br>Whale Watching, A Hotel and<br>Restaurant Along the Beach                       | Redwood Natl Pk<br>(707)464-6101<br>Crescent Beach<br>Motel<br>(707)464-5436                           | E                   | No Response<br>Equipment on<br>Site                              |

**DEL NORTE COUNTY: ECONOMICALLY SIGNIFICANT SITES**

| <b>SITE<br/>LAT/LONG</b>                 | <b>LOCATION</b>                                                                                                | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                                                                                                                                                                                                                                                                                                                                                                                             | <b>CONTACT NAMES /<br/>NUMBER</b>                                                                                                     | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                   |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------|
| <b>Site 18</b><br>41_42'30"<br>124_9'    | Mouth of Nickel<br>Creek<br>Off So End of<br>Enderts Beach Road                                                | Productive Commercial Surf<br>Perch Fishing Area. Part of<br>Del Norte Coast Redwood<br>State Park                                                                                                                                                                                                                                                                                                                                             | Redwood<br>National Park<br>(707)464-6101                                                                                             | D                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 19</b><br>41_36'<br>124_6'       | Wilson Beach/False<br>Klamath Cove Area<br>West of Hwy 101 5<br>Mi No of Klamath                               | Del Norte Coast Redwood<br>State Park Beach Access<br>Area, Popular Fishing and<br>Beach, Combing Area. To the<br>No of the Beach is the<br>Popular Redwood National<br>Park Lagoon Creek Fishing<br>Area. The Historic DeMartin<br>House (Youth Hostel) Also<br>Looks onto Wilson Beach<br>From the Southeast                                                                                                                                 | Redwood<br>National Park<br>(707)464-6101                                                                                             | E                   | No Response<br>Equipment on<br>Site                  |
| <b>Site 20</b><br>41_32'30"<br>124_4'30" | Klamath River<br>Estuary<br>20 Mi So of<br>Crescent City                                                       | Economically and Environ-<br>mentally Important.<br>Critical Habitat for<br>Declining Stocks of Salmon<br>and Steelhead. Culturally,<br>the Estuary is Important to<br>Local Native American<br>Subsistence and Commercial<br>Fishing and Non-native<br>Sport Fishing. Several<br>Sport Fishing, RV Parks Are<br>Located Within 2 Mi of the<br>Mouth. A Spill in this Area<br>Could Potentially Effect<br>the Fisheries 150 miles<br>Upstream. | Redwood<br>National Park<br>(707)464-6101<br>Del Norte<br>Dispatcher<br>(707)464-4191<br>Bureau of<br>Indian Affairs<br>(707)482-8185 | D                   | Yes - See<br>Annex F<br>Appendix 1 of<br>County Plan |
| <b>Site 21</b><br>41_32'<br>124_4'5"     | Redwood National<br>Park Outlook Points<br>and Trail Access<br>3 Mi West of Hwy<br>101 Via Flint Ridge<br>Road | Popular Sport and Native<br>American Subsistence<br>Fishing Area Also<br>Moderately used for Beach<br>Walking and Sight Seeing                                                                                                                                                                                                                                                                                                                 | Yurok Tribal<br>Council<br>(707)482-2921<br>Redwood<br>National Park<br>(707)464-6101                                                 | E                   | No Response<br>Equipment on<br>Site                  |

DEL NORTE COUNTY: ECONOMICALLY SIGNIFICANT SITES

| SITE<br>LAT/LONG | LOCATION                                                            | DESCRIPTION OF FACILITY/<br>USE/IMPORTANCE                         | CONTACT NAMES/<br>NUMBER                                       | RESP<br>CAT | RESPONSE<br>EQUIP ON-SITE?          |
|------------------|---------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------|-------------|-------------------------------------|
| <b>site</b> 22   | 3 Nautical Mi From<br>Coast Line, Del<br>Norte County Coast<br>Wide | Crab Fishing 4-6 Fathoms<br>(Dec 1-July 1) Salmon<br>Fishing Sport | David Allen<br>(707)464-5414<br>Jim Waldvogel<br>(707)464-4711 | D           | No Response<br>Equipment on<br>Site |
| <b>site</b> 23   | 10 Nautical Mi Off<br>Shore - Del Norte<br>County Coast Wide        | Shrimp Fishing 80 Fathoms<br>Deep (April 1-End of Sep)             | David Allen<br>(707)464-5414<br>Jim Waldvogel<br>(707)464-4711 | D           | No Response<br>Equipment on<br>Site |



Humboldt County  
Economically Significant Sites

Map # 1

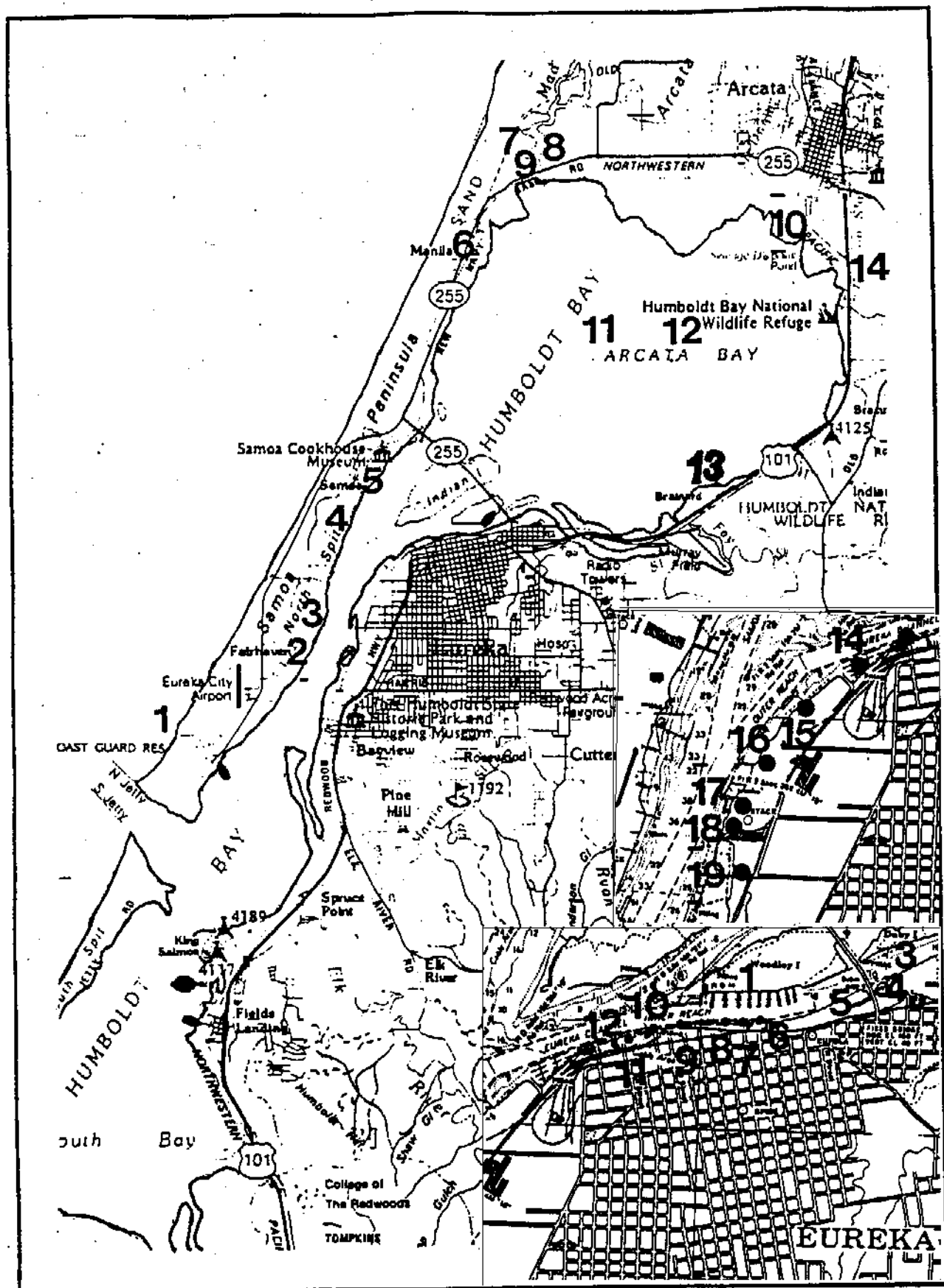


**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #1**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                  | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>     | <b>CONTACT NAMES/<br/>NUMBER</b>                                 | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                              |
|--------------------------|----------------------------------|--------------------------------------------------------|------------------------------------------------------------------|---------------------|-----------------------------------------------------------------|
| <b>Site 1</b>            | Redwood National<br>Park         | Major Coastal Recreational<br>Area                     | Park Dispatch<br>(707)464-6101                                   | E                   | NO                                                              |
| <b>Site 2</b>            | Prairie Creek State<br>Park      | 160 Acre Park With<br>Campground                       | Park Dispatch<br>(707)445-4567                                   | E                   | NO                                                              |
| <b>Site 3</b>            | Humboldt Lagoons<br>State Park   | 1,036 Acre Park With<br>Campground                     | Park Dispatch<br>(707)445-4567                                   | E                   | NO                                                              |
| <b>Site 4</b>            | Big Lagoon County<br>Park        | County Park With Boat Ramp<br>& Campground             | Dir of Parks<br>(707)445-7651                                    | E                   | NO                                                              |
| <b>Site 5</b>            | Patricks Point<br>State Park     | 632 Acre Park With<br>Campground                       | Park Dispatch<br>(707)445-4567                                   | E                   | NO                                                              |
| <b>Site 6</b>            | Trinidad State<br>Beach          | 159 Acre Park With Restroom                            | Park Dispatch<br>(707)445-4567                                   | E                   | NO                                                              |
| <b>Site 7</b>            | Trinidad Marine Lab              | Teaching/Research Lab With<br>Water Intake             | Bus Office/24HR<br>(707)677-3671<br>(707)826-3456                | D                   | NO                                                              |
| <b>Site 8</b>            | Trinidad Harbor                  | Commercial/Recreational<br>Boat Mooring & Fishing Pier | Boat Basin<br>(707)677-3625<br>Trinidad Police<br>(707)677-0133  | E                   | YES-BOB'S BOAT<br>BASIN HAS 50<br>SORBENT PADS.<br>SEE ANNEX F. |
| <b>Site 9</b>            | Luffenholtz Beach<br>County Park | County Park                                            | County Parks<br>(707)445-7651<br>Humboldt Disp.<br>(707)445-7251 | E                   | NO                                                              |
| <b>Site 10</b>           | Moonstone County<br>Park         | Fishing/Clamming/Surfing                               | County Parks<br>(707)445-7651<br>Humboldt Disp.<br>(707)445-7251 | E                   | NO                                                              |
| <b>Site 11</b>           | Little River State<br>Beach      | Beach West Estuary                                     | Park Dispatch<br>(707)445-4567                                   | E                   | NO                                                              |

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #1**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>   | <b>CONTACT NAMES/<br/>NUMBER</b>                                 | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|--------------------------------|------------------------------------------------------|------------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 12</b>           | Clam Beach County<br>Park      | County Beach With Parking<br>and Restrooms           | County Parks<br>(707)445-7651<br>Humboldt Disp.<br>(707)445-7251 | E                   | NO                                 |
| <b>Site 13</b>           | Mad River Beach<br>County Park | 150 Acre Park With Parking,<br>Boat Ramp and Estuary | County Parks<br>(707)445-7651<br>Humboldt Disp.<br>(707)445-7251 | E                   | NO                                 |
| <b>Site</b>              |                                |                                                      |                                                                  |                     |                                    |
| <b>Site</b>              |                                |                                                      |                                                                  |                     |                                    |
| <b>Site</b>              |                                |                                                      |                                                                  |                     |                                    |
| <b>Site</b>              |                                |                                                      |                                                                  |                     |                                    |
| <b>Site</b>              |                                |                                                      |                                                                  |                     |                                    |



**Humboldt County  
Economically Significant Sites**

**Map # 2**

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #2**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                       | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                 | <b>CONTACT NAMES/<br/>NUMBER</b>                                                           | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|---------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 1</b>            | BLM Property                          | Coastal Beach and Dunes                                            | BLM Manager<br>(707)822-7648                                                               | E                   | NO                                 |
| <b>Site 2</b>            | Town of Fairhaven                     | Residential Community                                              | Fire Department<br>(707)443-9042                                                           | F                   | NO                                 |
| <b>Site 3</b>            | Simpson Pulp Mill                     | Closed Industrial Mill Site                                        | (707)443-5300<br>Fire Department<br>(707)443-9042                                          | F                   | NO                                 |
| <b>Site 4</b>            | Louisiana Pacific<br>Mill             | Pulp Mill                                                          | Louisiana Pac.<br>(707)443-7511<br>24 Hr #<br>(707)443-4569                                | E                   | NO                                 |
| <b>Site 5</b>            | Town of Samoa                         | Residential Community                                              | County Dispatch<br>(707)445-7251                                                           | F                   | NO                                 |
| <b>Site 6</b>            | Town of Manila                        | Residential Community                                              | County Dispatch<br>(707)445-7251                                                           | F                   | NO                                 |
| <b>Site 7</b>            | Mad River Slough<br>and Dunes         | Multi-use Public Area<br>(COOP Managed)                            | Nature Conser.<br>(707)882-6378<br>BLM<br>(707)822-7648<br>Humboldt Disp.<br>(707)445-7251 | E                   | NO                                 |
| <b>Site 8</b>            | Sierra Pacific<br>Industries          | Lumber Mill                                                        | Business Office<br>(707)443-3111                                                           | F                   | NO                                 |
| <b>Site 9</b>            | Mad River Slough<br>Mariculture Sites | Mariculture Sites in North<br>Bay and Slough                       | Kuiper Maricult<br>(707)822-9057                                                           | D                   | NO                                 |
| <b>Site 10</b>           | Arcata Marsh<br>Foot of K Street      | 65 Acre Water Treatment,<br>Salmon Ranching, & Wildlife<br>Habitat | Arcata Pub Work<br>(707)822-6918<br>Dispatch<br>(707)882-2424                              | D                   | NO                                 |

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #2**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                                | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                | <b>CONTACT NAMES/<br/>NUMBER</b>                                                                                                  | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 11</b>           | Numerous Locations<br>in North Humboldt<br>Bay | Commercial Mariculture<br>Sites                                   | NoBay Shellfish<br>(707)839-4723<br>Coast Oyster<br>(707)442-2946<br>24 Hr #<br>(707)442-3779<br>Kuiper Maricult<br>(707)822-9057 | D                   | NO                                 |
| <b>Site 12</b>           | Humboldt Bay<br>National Wildlife<br>Refuge    | USFW Managed Wildlife<br>Refuge on North Humboldt<br>Bay          | Refuge Manager<br>(707)733-5406                                                                                                   | D                   | NO                                 |
| <b>Site 13</b>           | Arcata Redwood Mill                            | Lumber Mill                                                       | Business Office<br>(707)443-5031                                                                                                  | F                   | NO                                 |
| <b>Site 14</b>           | North Coast<br>Railroad                        | Rail Line Along Northern<br>Split. Freight Traffic to<br>Willits. | Business Office<br>(707)444-8055                                                                                                  | F                   | NO                                 |
| <b>Site</b>              |                                                |                                                                   |                                                                                                                                   |                     |                                    |
| <b>Site</b>              |                                                |                                                                   |                                                                                                                                   |                     |                                    |
| <b>Site</b>              |                                                |                                                                   |                                                                                                                                   |                     |                                    |

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #3-A**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                      | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                  | <b>CONTACT NAMES/<br/>NUMBER</b>                                     | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>            |
|--------------------------|--------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------------|---------------------|-----------------------------------------------|
| <b>Site 1</b>            | Woodley Island<br>Marina             | Harbor District - Marina<br>with 237 slips                          | Harbormaster<br>(707)443-0801                                        | E                   | YES-CG VESSEL<br>& HBRMASTER.<br>SEE ANNEX F. |
| <b>Site 2</b>            | Indian Island                        | City Owned Wetlands,<br>Culturally Sensitive                        | Wiyot Trbl Cncl<br>(707)773-5055<br>Eureka Util Dir<br>(707)441-4207 | D                   | NO                                            |
| <b>Site 3</b>            | Daby Island                          | City Owned Wetlands,<br>Culturally Sensitive                        | Wiyot Trbl Cncl<br>(707)773-5055<br>Eureka Util Dir<br>(707)441-4207 | D                   | NO                                            |
| <b>Site 4</b>            | Eureka Boat Ramp<br>Foot of R Street | Under Hwy #255 Bridge                                               | Eureka Util Dir<br>(707)441-4207<br>24 Hr #<br>(707)441-4044         | E                   | NO                                            |
| <b>Site 5</b>            | East Plaza<br>Community              | Amphitheater and Community<br>Center (Foot of R Street)             | Eureka City<br>(707)441-4207<br>24 Hr #<br>(707)441-4044             | E                   | NO                                            |
| <b>Site 6</b>            | K Street Pier<br>Foot of K Street    | Commercial Fishing<br>Operation                                     | Caito Fisheries<br>(707)443-0550<br>Eureka Dispatch<br>(707)441-4044 | E                   | NO                                            |
| <b>Site 7</b>            | J Street Pier<br>Foot of J Street    | Public Pier                                                         | Eureka City<br>(707)441-4207<br>24 Hr #<br>(707)441-4044             | E                   | NO                                            |
| <b>Site 8</b>            | I Steet Wharf<br>Between I & J St    | N.Cal Seafoods/Eureka<br>Fisheries Commercial<br>Fishing Operations | (707)442-8218<br>(707)443-1673<br>Eureka Dispatch<br>(707)441-4044   | E                   | NO                                            |

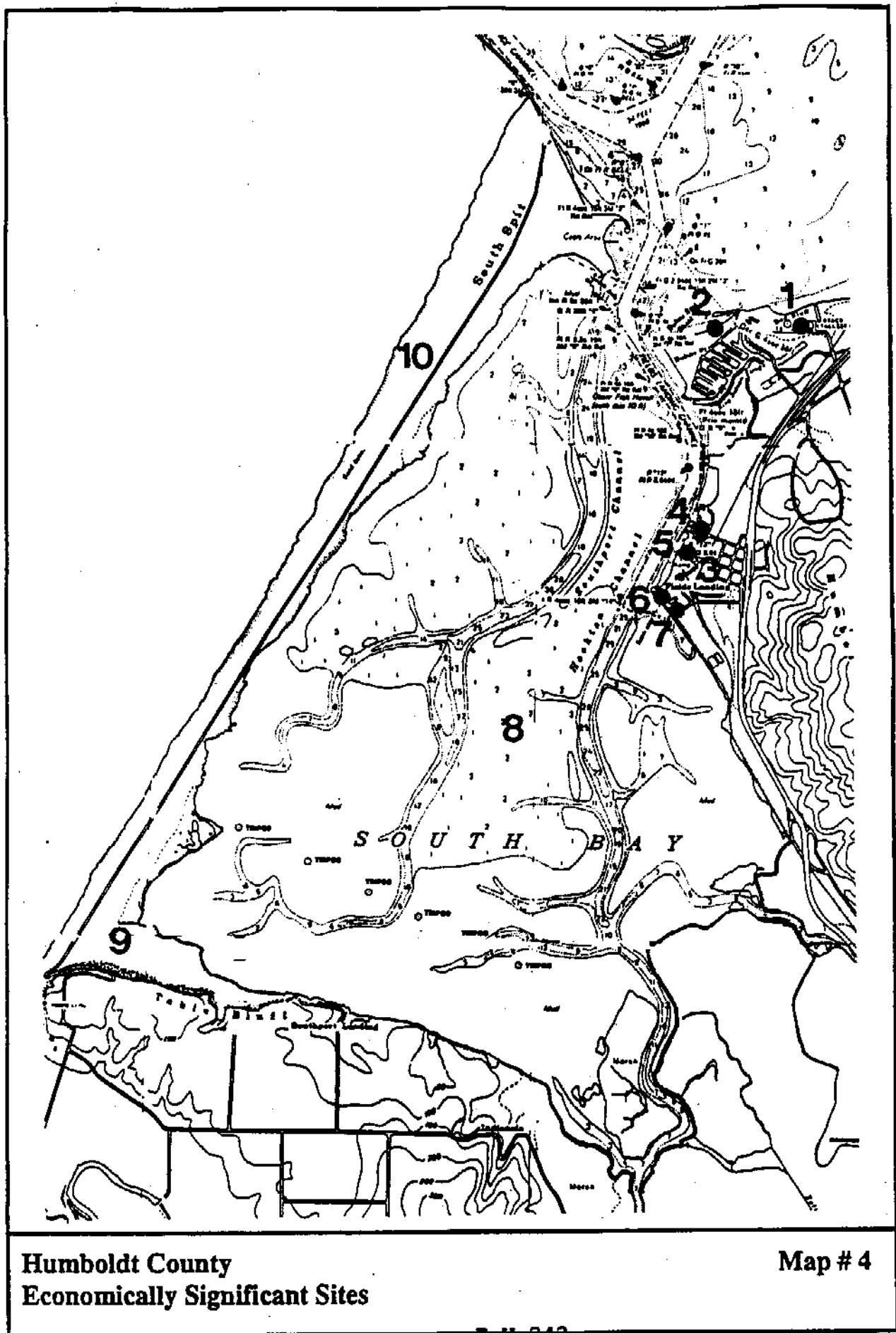
**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #3-A**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                                        | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b> | <b>CONTACT NAMES/<br/>NUMBER</b>                                     | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|--------------------------------------------------------|----------------------------------------------------|----------------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 9</b>            | Fishermans Coop<br>Wharf Between D &<br>F Streets      | City Owned Dock & Building                         | Eureka Cty Util<br>(707)441-4207<br>Eureka Dispatch<br>(707)441-4044 | E                   | NO                                 |
| <b>Site 10</b>           | Humboldt Bay Harbor<br>Cruise Dock<br>Foot of C Street |                                                    | H. Bay Cruises<br>(707)445-1910<br>Eureka Cty Util<br>(707)441-4207  | E                   | NO                                 |
| <b>Site 11</b>           | Coast Oyster                                           | Mariculture Facility                               | Coast Oyster<br>(707)442-2974<br>Eureka Cty Util<br>(707)441-4207    | E                   | NO                                 |
| <b>Site 12</b>           | Eureka Ice/Cold<br>Storage Wharf<br>Foot of A Street   | Commercial Fishery Support<br>Facility             | Eureka Fish.<br>(707)443-5663<br>Eureka Cty Util<br>(707)441-4207    | E                   | NO                                 |
| <b>site</b>              |                                                        |                                                    |                                                                      |                     |                                    |
| <b>site</b>              |                                                        |                                                    |                                                                      |                     |                                    |
| <b>site</b>              |                                                        |                                                    |                                                                      |                     |                                    |

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #3-B**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                                                            | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>               | <b>CONTACT NAMES/<br/>NUMBER</b>                                     | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                               |
|--------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------|---------------------|------------------------------------------------------------------|
| <b>Site 13</b>           | Commercial St. Dock                                                        | Serves Coast Guard Cutter,<br>Fishing and Maritime<br>Industries | Eureka Fish.<br>(707)443-5663<br>Eureka Cty Util<br>(707)441-4207    | E                   | NO                                                               |
| <b>Site 14</b>           | Small Craft Harbor<br>West of Commercial<br>Street                         | City Operated Marina                                             | Eureka Cty Mar.<br>(707)441-4230<br>Eureka Dispatch<br>(707)441-4044 | E                   | NO                                                               |
| <b>Site 15</b>           | Humboldt B Dock<br>First St Between<br>Commercial and<br>Washington Street | Commercial Fisheries Dock                                        | Pt St George<br>(707)443-8391<br>Eureka Cty Util<br>(707)441-4207    | E                   | NO                                                               |
| <b>Site 16</b>           | A Dock (Pacific<br>Affiliates)<br>Foot of Wash. St                         | Staging Area for MSRC &<br>Humboldt Bay Spill Response<br>COOP   | Pac Affiliates<br>(707)445-3001<br>Eureka Dispatch<br>(707)441-4044  | E                   | YES-MSRC & HUM<br>BAY RESPONSE<br>CORP EQUIPMENT<br>SEE ANNEX F. |
| <b>Site 17</b>           | Unocal Dock<br>14Th Street                                                 | Commercial Fuel Depot                                            | Business Office<br>(707)443-7600<br>24 Hr #<br>(707)444-6470         | E                   | YES-UNOCAL AND<br>HUM BAY COOP<br>EQUIPMENT. SEE<br>ANNEX F.     |
| <b>Site 18</b>           | Eureka Forest Prod<br>Dock<br>Foot of 14Th Street                          | Timber Industrial Facility                                       | E. Forest Prod<br>(707)443-7309<br>Eureka Dispatch<br>(707)441-4044  | E                   | NO                                                               |
| <b>Site 19</b>           | Del Norte St. Pier<br>Foot of Del Norte                                    | Public Pier                                                      | Eureka City<br>(707)443-8691<br>Eureka Dispatch<br>(707)441-4044     | E                   | NO                                                               |
| <b>Site 20</b>           | Chevron Dock<br>Foot of Harris St                                          | Commercial Fuel Depot                                            | (707)444-7850<br>24 Hr #<br>441-4044                                 | E                   | YES-CHEVRON &<br>HUM BAY COOP<br>EQUIP. ANNEX F                  |



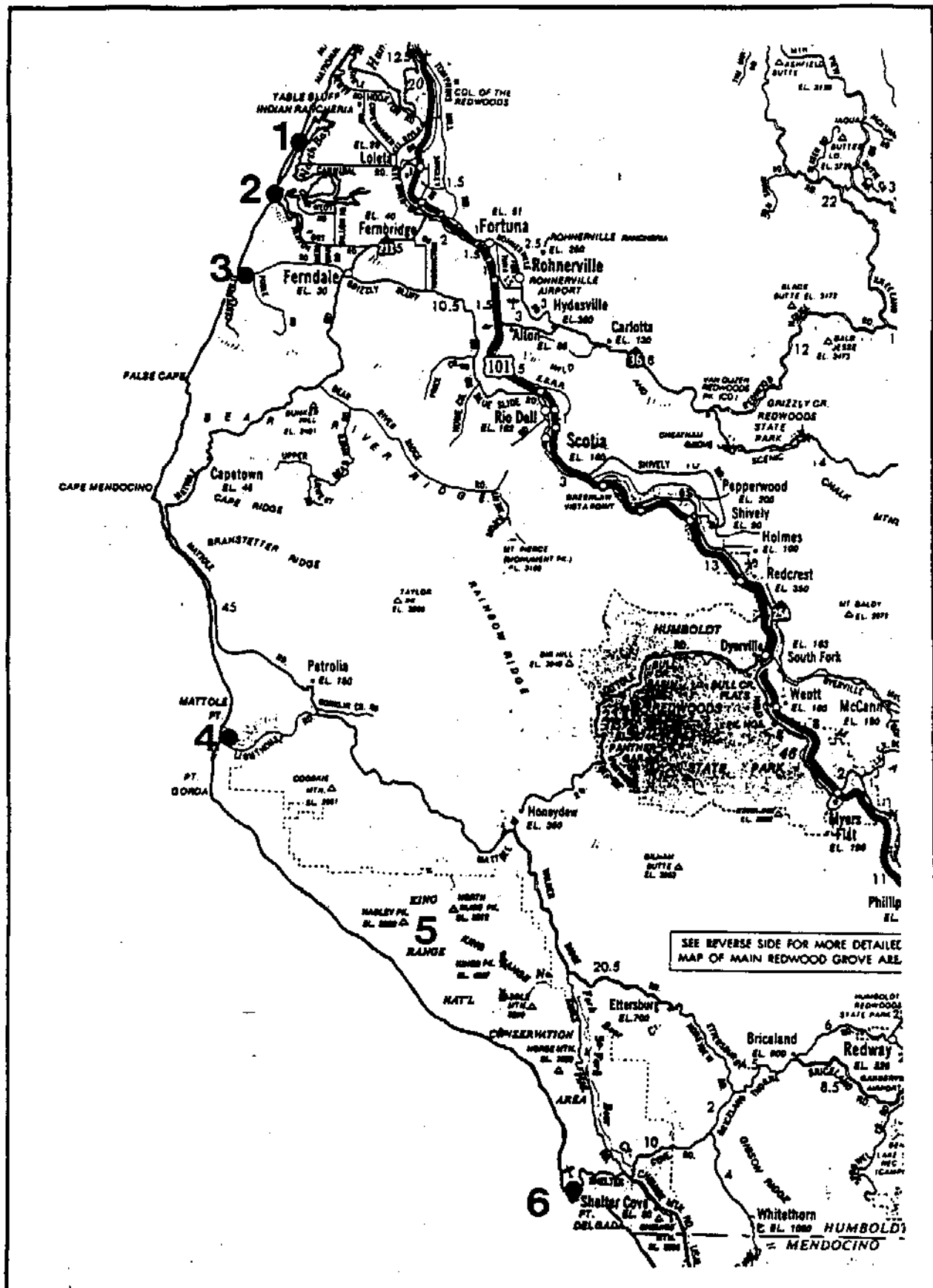


**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #3-B**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                          | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>   | <b>CONTACT NAMES/<br/>NUMBER</b>                                    | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|------------------------------------------|------------------------------------------------------|---------------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 21</b>           | Crowley Tank Farm<br>Foot of Hilfiker St | Closed 180,000 Barrel Tank<br>Farm & Commercial Dock | Crowley Marine<br>(206)443-8100<br>Eureka Dispatch<br>(707)441-4044 | E                   | NO                                 |
| <b>Site 22</b>           | Recreational<br>Clamming Beds            | Recreational Sites                                   | Eureka City<br>(707)443-8691<br>Eureka Dispatch<br>(707)441-4044    | D                   | NO                                 |
| <b>Site 23</b>           | Elk River Waste<br>Treatment Plant       | Eureka Sewage Facility                               | Utilities Dir<br>(707)441-4207                                      | E                   | NO                                 |
| <b>Site</b>              |                                          |                                                      |                                                                     |                     |                                    |
| <b>Site</b>              |                                          |                                                      |                                                                     |                     |                                    |
| <b>Site</b>              |                                          |                                                      |                                                                     |                     |                                    |
| <b>Site</b>              |                                          |                                                      |                                                                     |                     |                                    |
| <b>Site</b>              |                                          |                                                      |                                                                     |                     |                                    |

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #4**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                                                                    | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                     | <b>CONTACT NAMES/<br/>NUMBER</b>                                               | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b>                               |
|--------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------|
| <b>Site 1</b>            | PG&E Power Plant<br>King Salmon                                                    | Electric Utility Plant<br>Community Power Supply                       | 24 Hr #<br>(707)444-0712                                                       | Heal<br>&<br>Safe   | YES-PG&E & HUM<br>BAY RESPONSE<br>CORP EQUIPMENT<br>SEE ANNEX F. |
| <b>Site 2</b>            | King Salmon                                                                        | Breakwater, Recreational<br>Beach, Fishing/Charter Boat                | Eureka City<br>(707)443-8691<br>Eureka Dispatch<br>(707)441-4044               | E                   | NO                                                               |
| <b>Site 3</b>            | Fields Landing                                                                     | Deep Water Port, Boat Ramp<br>Wharf Owned By H. Bay<br>Forest Products | H Bay For. Prod<br>(707)444-4038<br>Humboldt Disp.<br>(707)445-7251            | E                   | NO                                                               |
| <b>Site 4</b>            | S Bay Marina Pier<br>No of C St, Fields<br>Landing                                 | Commercial Pier                                                        | S Bay Marina<br>(707)442-4571                                                  | E                   | NO                                                               |
| <b>Site 5</b>            | Eureka Fisheries<br>Pier<br>So of C St, Fields<br>Landing                          | Commercial Pier                                                        | Eureka Fish.<br>(707)443-5663                                                  | E                   | NO                                                               |
| <b>Site 6</b>            | Harbor Marine Serv.<br>Wharf<br>South Bay Depot Rd                                 | 5 Acre Paved Boat Repair<br>Facility With 150 Ton<br>Travel Lift       | Harbor Marine<br>(707)444-3851<br>Harbor District<br>(707)443-0801             | E                   | NO                                                               |
| <b>Site 7</b>            | Kuiper Mariculture<br>Inc.<br>So Bay Depot Road                                    | Mariculture Nursery Area on<br>Waterfront Dock With Water<br>Intake    | Kuiper Maricult<br>(707)822-9057<br>Business<br>(707)822-5102<br>(707)499-5006 | D                   | NO                                                               |
| <b>Site 8</b>            | Humboldt Bay Natl'<br>Wildlife Refuge<br>Hookton Road(Car)<br>Fields Landing(Boat) | 4,600 Acre Wildlife Habitat                                            | Refuge Manager<br>(707)733-5406<br>Humboldt Disp<br>(707)445-7251              | D                   | NO                                                               |

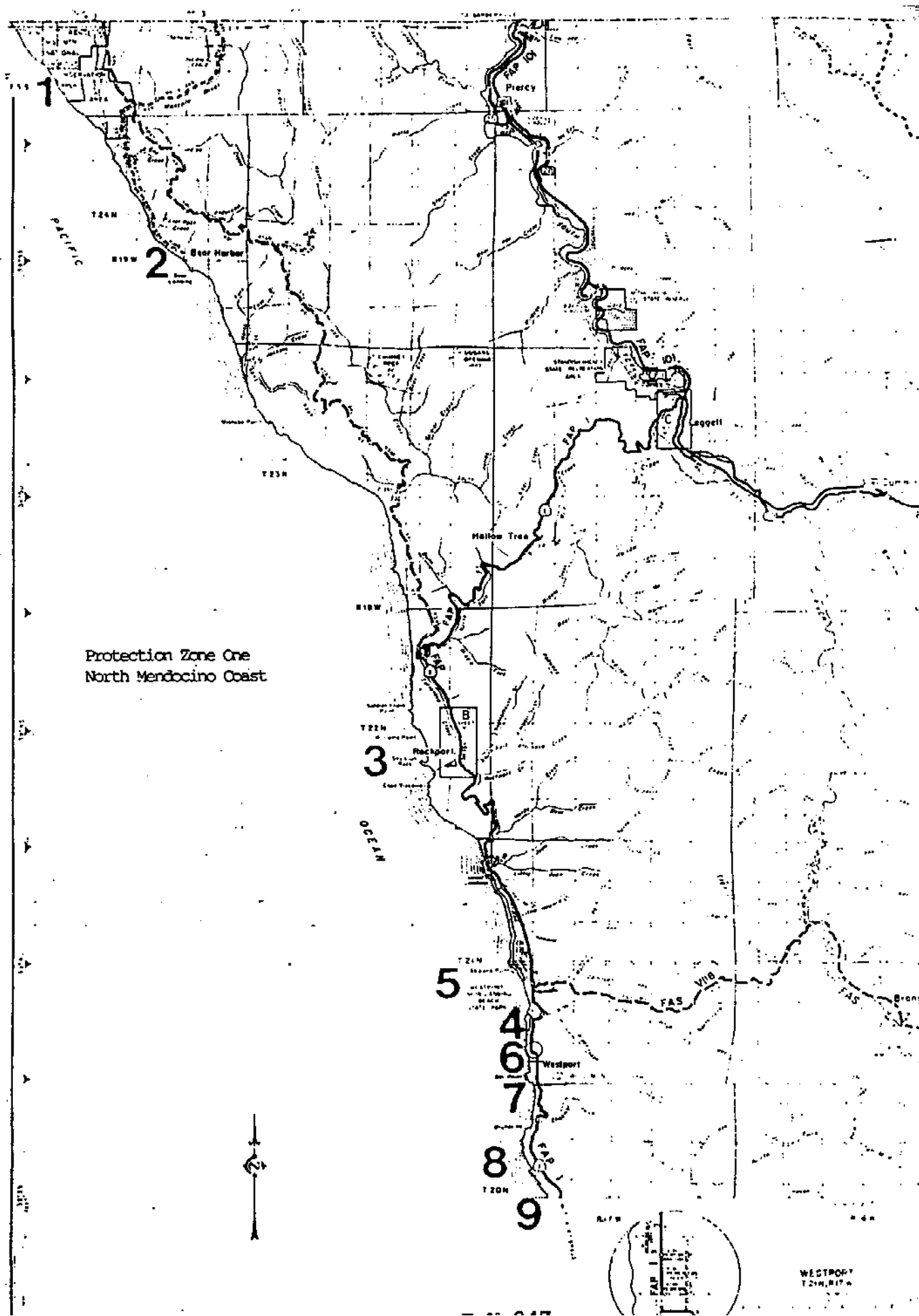


Humboldt County  
Economically Significant Sites

Map # 5

**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #4**

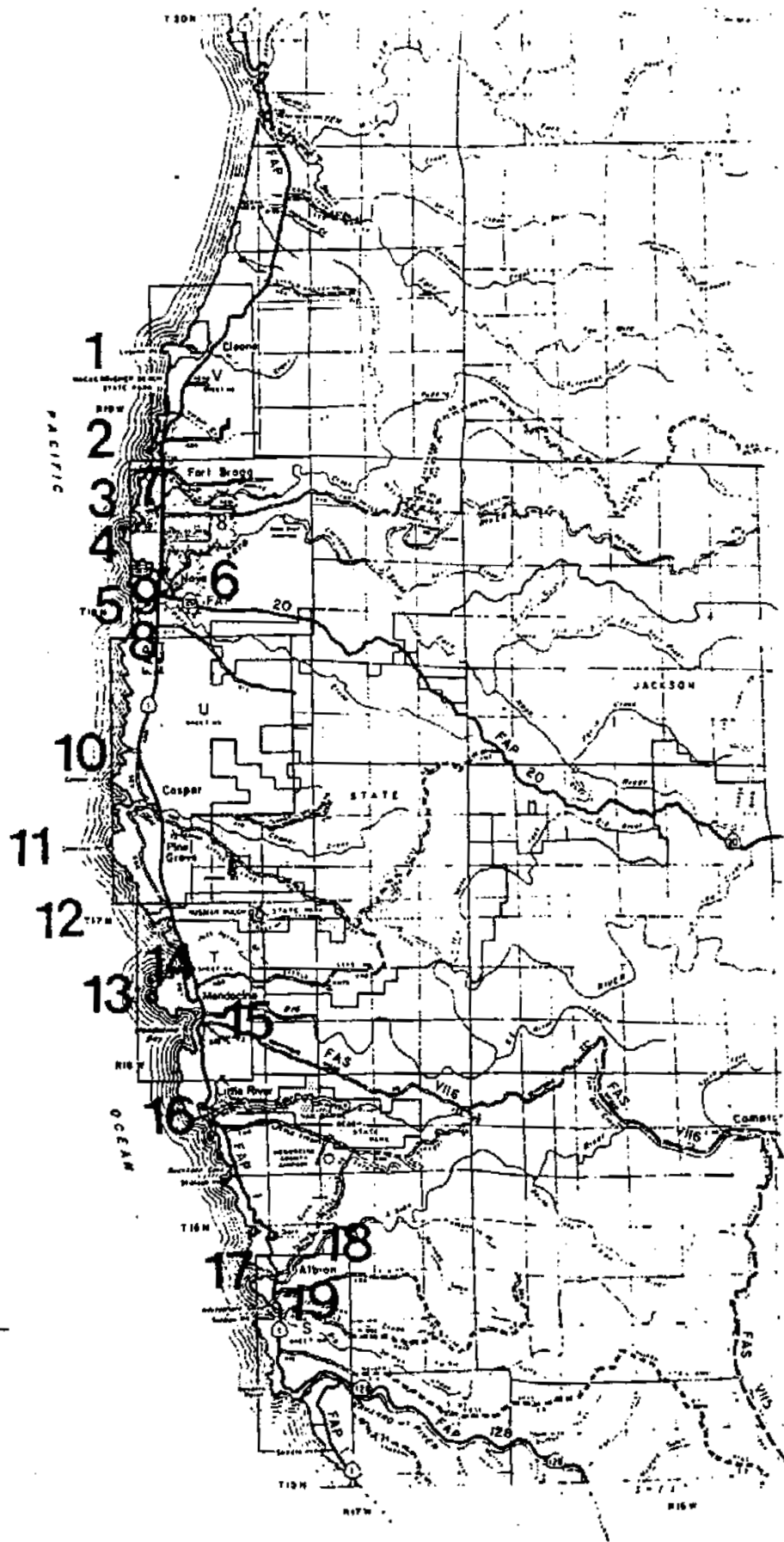
| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>              | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b> | <b>CONTACT NAMES/<br/>NUMBER</b>                                | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|------------------------------|----------------------------------------------------|-----------------------------------------------------------------|---------------------|------------------------------------|
| <b>Site 9</b>            | Table Bluff County<br>Park   | Public Coastal Access                              | County Parks<br>(707)445-7651<br>Humboldt Disp<br>(707)445-7251 | E                   | NO                                 |
| <b>Site 10</b>           | South Spit Fishing<br>Access | Public Fishing Access at<br>Jetty                  | Humboldt Disp<br>(707)445-7251                                  | E                   | NO                                 |
| <b>Site</b>              |                              |                                                    |                                                                 |                     |                                    |
| <b>Site</b>              |                              |                                                    |                                                                 |                     |                                    |
| <b>Site</b>              |                              |                                                    |                                                                 |                     |                                    |
| <b>Site</b>              |                              |                                                    |                                                                 |                     |                                    |
| <b>Site</b>              |                              |                                                    |                                                                 |                     |                                    |



**HUMBOLDT COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #5**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                          | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                           | <b>CONTACT NAMES/<br/>NUMBER</b>                                  | <b>RESP<br/>CAT</b> | <b>RESPONSE<br/>EQUIP ON-SITE?</b> |
|--------------------------|------------------------------------------|------------------------------------------------------------------------------|-------------------------------------------------------------------|---------------------|------------------------------------|
| <b>site 1</b>            | Crab County Park                         | Boating Access, Wildlife Preserve                                            | County Parks<br>(707)445-7651<br>Humboldt Disp<br>(707)445-7251   | E                   | NO                                 |
| <b>site 2</b>            | Eel River                                | Major Salmon Spawning Area                                                   | Cal. F & G<br>(707)441-5752                                       | D                   | NO                                 |
| <b>site 3</b>            | Centerville Beach<br>County Park         | Coastal Access                                                               | County Parks<br>(707)445-7651<br>Humboldt Disp<br>(707)445-7251   | E                   | NO                                 |
| <b>site 4</b>            | Mattole River &<br>Beach                 | Public Coastal Access                                                        | Cal. F & G<br>(707)441-5752                                       | D                   | NO                                 |
| <b>site 5</b>            | King Range National<br>Conservation Area | 60,000 Acre National<br>Conservation Area With<br>Camping and Coastal Access | Area Manager<br>(707)822-7648<br>Kings Range Off<br>(707)986-7731 | E                   | NO                                 |
| <b>site 6</b>            | Shelter Cove                             | Public Coastal Access, Boat<br>Ramp, Rental Boats                            | S.C. Fire Dept<br>(707)986-7507<br>Resort Improv<br>(707)986-7447 | E                   | NO                                 |
| <b>site</b>              |                                          |                                                                              |                                                                   |                     |                                    |
| <b>site</b>              |                                          |                                                                              |                                                                   |                     |                                    |
| <b>site</b>              |                                          |                                                                              |                                                                   |                     |                                    |

Protection Zone Two  
Central Mendocino County



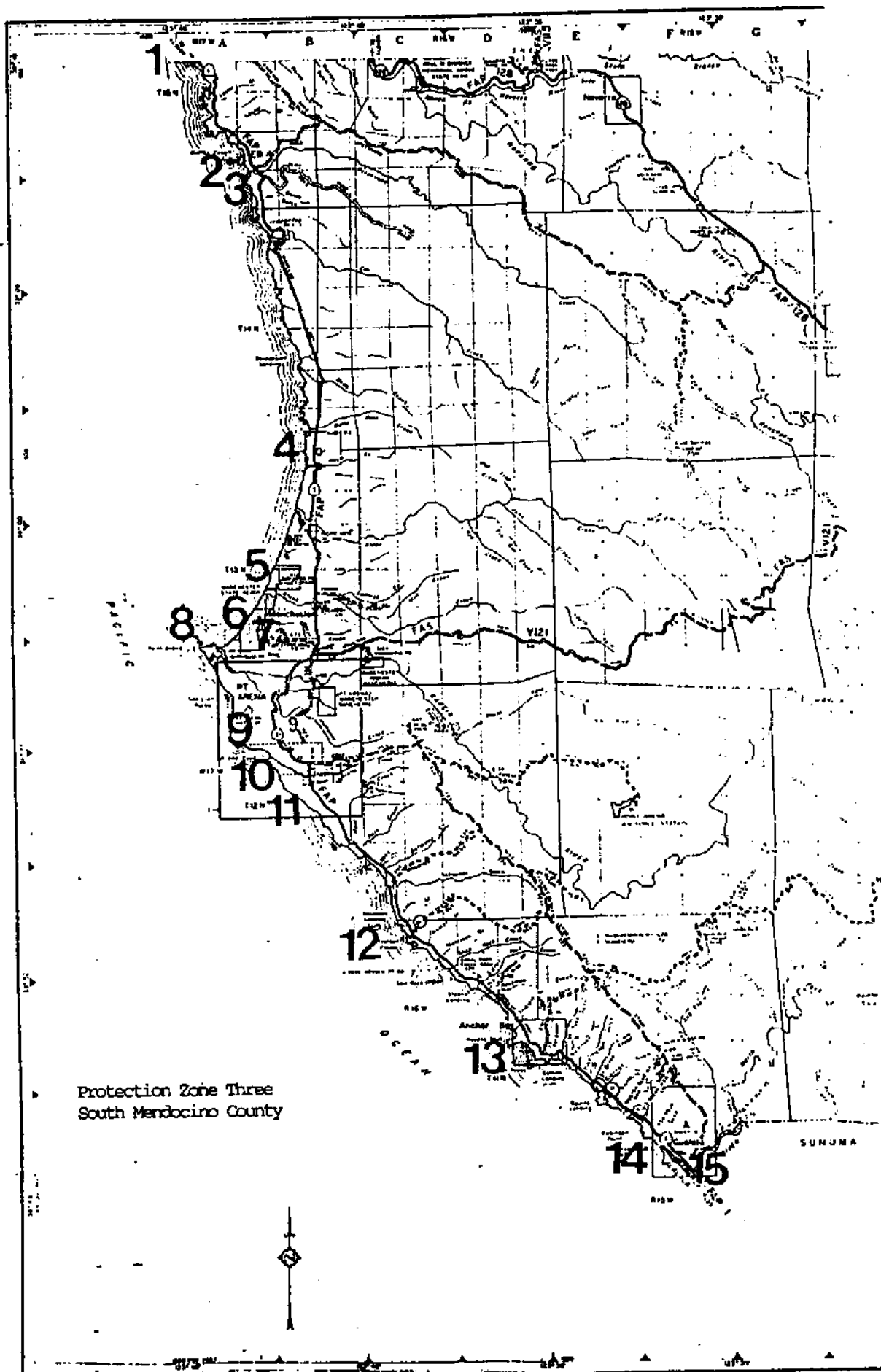


**MENDOCINO COUNTY: ECONOMICALLY SIGNIFICANT SITES**  
**MAP #1**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                           | <b>DESCRIPTION OF FACILITY<br/>USE/IMPORTANCE</b>                      | <b>CONTACT NAMES/<br/>NUMBER (707)</b> | <b>RESP<br/>CAT</b> | <b>Response<br/>Equip?</b> |
|--------------------------|-------------------------------------------|------------------------------------------------------------------------|----------------------------------------|---------------------|----------------------------|
| <b>Site 1</b>            | Kings Range National<br>Conservation Area | 60,000 Acre National<br>Conservation Area w/Camp<br>and Coastal Access | 986-7731                               | E                   | NO                         |
| <b>Site 2</b>            | Sinkyone Wilderness State<br>Park         | 7,000 Acre Wilderness Area<br>w/Camp and Coastal Access                | 946-2311<br>986-7711                   | E                   | NO                         |
| <b>Site 3</b>            | Chadbourne Gulch                          | Coastal Access                                                         | 937-5804                               | E                   | NO                         |
| <b>Site 4</b>            | Wages Creek Beach                         | Coastal Access and Camping                                             | 964-2964                               | E                   | NO                         |
| <b>Site 5</b>            | Westport-Union Landing<br>State Beach     | Coastal Access and Camping                                             | 233-7660                               | E                   | NO                         |
| <b>Site 7</b>            | Cape Vizcaino                             | Coastal Access                                                         | 937-5804                               | E                   | NO                         |
| <b>Site 8</b>            | Seaside Creek Beach                       | Coastal Access                                                         | 937-5804                               | E                   | NO                         |
| <b>Site 9</b>            | Ten Mile River Beach Area                 | Coastal Access                                                         | 937-5804                               | E                   | NO                         |

**MENDOCINO COUNTY: ECONOMICALLY SIGNIFICANT SITES  
MAP #2**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>                      | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>                         | <b>CONTACT NAMES/<br/>NUMBER (707)</b> | <b>RESP<br/>CAT</b> | <b>Response<br/>Equip?</b>      |
|--------------------------|--------------------------------------|----------------------------------------------------------------------------|----------------------------------------|---------------------|---------------------------------|
| <b>Site 1</b>            | Mackerricher State Park              | Coastal Access and Camping                                                 | 964-9112<br>937-5804                   | E                   | NO                              |
| <b>Site 2</b>            | Pudding Creek Beach Area             | Coastal Access                                                             | 937-5804                               | E                   | NO                              |
| <b>Site 5</b>            | Noyo River and Harbor                | Noyo Harbor District<br>Commercial & Private<br>Vessel Moorings            | 964-4719                               | D                   | YES-CG &<br>HBRMSTR.<br>ANNEX F |
| <b>Site 8</b>            | College of the Redwoods              | School Campus                                                              | 961-1001                               | D                   | NO                              |
| <b>Site 9</b>            | Mendocino Coast Botanical<br>Gardens | Coastal Access                                                             | 964-4352                               | E                   | NO                              |
| <b>Site 11</b>           | Point Cabrillo Light House           | Coastal Access Campground<br>Transfer Facility                             | 937-5804                               | E                   | NO                              |
| <b>Site 12</b>           | Russian Gulch State Park             | Coastal Access Campground<br>Barge Mooring                                 | 937-5804                               | E                   | NO                              |
| <b>Site 14</b>           | Mendocino Headlands                  | Coastal Access                                                             | 937-5804                               | E                   | NO                              |
| <b>Site 15</b>           | Big River                            | Coastal Access                                                             | 937-5804                               | E                   | NO                              |
| <b>Site 16</b>           | Van Damme State Park                 | Coastal Access Campground                                                  | 937-5804                               | E                   | NO                              |
| <b>Site 17</b>           | Albion River and Harbor              | Coastal Access Campgrounds<br>Fishing and Private & Rec<br>Vessel Moorings | 937-0606                               | D                   | NO                              |
| <b>Site 18</b>           | Pacific Union College                | Private School Campus                                                      |                                        | D                   | NO                              |



**MENDOCINO COUNTY: ECONOMICALLY SIGNIFICANT SITES**  
**MAP #3**

| <b>SITE<br/>LAT/LONG</b> | <b>LOCATION</b>         | <b>DESCRIPTION OF FACILITY/<br/>USE/IMPORTANCE</b>             | <b>CONTACT NAMES/<br/>NUMBER (707)</b> | <b>RESP<br/>CAT</b> | <b>Response<br/>Equip?</b>    |
|--------------------------|-------------------------|----------------------------------------------------------------|----------------------------------------|---------------------|-------------------------------|
| <b>Site 1</b>            | Navarro River           | Coastal Access Campgrounds                                     | 937-5804                               | F                   | NO                            |
| <b>Site 2</b>            | Greenwood Cr. Project   | Coastal Access                                                 | 937-5804                               | F                   | NO                            |
| <b>Site 5</b>            | Manchester State Beach  | Coastal Access Campgrounds                                     | 937-5804                               | E                   | NO                            |
| <b>Site 6</b>            | PT & T Company          | Trans-Pacific Telephone<br>System                              | 882-1815                               | E                   | NO                            |
| <b>Site 8</b>            | Point Arena Light House | Coastal Access                                                 | 882-2777                               | D                   | NO                            |
| <b>Site 10</b>           | Point Arena Harbor      | City Harbor Yacht and<br>Commercial Fishing<br>Vessel Moorings | 882-2583<br>882-2645                   | D                   | YES-SEE<br>HBRMSTR<br>ANNEX F |
| <b>Site 11</b>           | Bowling Ball Beach      | Coastal Access                                                 | 937-5804                               | E                   |                               |
| <b>Site 12</b>           | Saunders Reef           | Coastal Access                                                 | 937-5804                               | E                   |                               |
| <b>Site 15</b>           | Gualala River           | Coastal Access                                                 | none                                   | E                   |                               |

## **TAB C HISTORICAL AND CULTURALLY SENSITIVE AREAS**

### **Introduction**

The primary purpose of Tabs A through C of this Appendix is to identify and incorporate into emergency response planning, the specific resources subject to injury or damages from an oil spill event. An important and immediate consideration at the occurrence of an oil spill in California marine waters is whether areas that are culturally sensitive or contain historical or archaeological resources may be impacted by the spill. The affects of oil upon these resources can be extremely damaging. Often of greatest concern to the safety of cultural and historical resources is the response actions such as establishment of equipment staging areas. Culturally sensitive areas are often difficult to identify visually and therefore pre-sill planning becomes essential to avoid damaging these resources.

Historical resources are defined under the California Environmental Quality Act (CEQA) to include, but no limited to: "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." These sites or areas would either be on or eligible to be placed on the California Register of Historical Resources or the National Register of Historical Places.

The CEQA defines an important archaeological resource as one that: A) is associated with an event or person of; 1) recognized significance in California or American history, or 2) recognized scientific important in prehistory; B) can provide information which is both demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions; C) has a special or particular quality such as oldest, best example, largest, or last surviving example of its kind; D) is at least 100 years old and possesses substantial stratigraphic integrity; E) involves important research questions that historical research has shown can be answered only with archaeological methods."

### **Culturally Sensitive Areas**

This Area Contingency Plan does not attempt to identify the location of sites or areas of importance to Native Americans. Many of the coastal areas of significance to Native Americans are known or have been identified, but are often confidential information. This planning document provides, as available, the contact names, locations and phone numbers of knowledgeable sources for information on areas of cultural or economic significance to Native Americans within California.

The coastline of California contains many sites with culturally sensitive resources. The locations of some sites are available to the general public but many other locations are held as confidential information at Regional Information Centers throughout the State and by local Indian organizations. Culturally sensitive areas exist on both public and private lands and therefore the following public agencies and individuals listed below should be contacted during a significant oil spill incident:

#### **Native American Heritage Commission**

915 Capitol Mall, Room 364  
Sacramento, CA 95814

P.O.C.: Larry Myers or Gayle McNulty  
Phone: (916) 653-4082  
FAX: (916) 657-5390

**Office of Historic Preservation**

Department of Parks and Recreation  
P.O. Box 94296  
Sacramento, CA 94296-000

CEQA Information: Carol Roland

Phone: (916) 653-6624

FAX: (916) 653-9824

**Resource Protection Division**

Department of Parks and Recreation  
Sacramento, CA 94296-0001

Senior State Archaeologist: John W. Foster

Phone: (916) 653-4529

**Local Native American Representatives**

A geographic distribution of Native American tribes in California is shown following the list of regional information centers for historically sensitive resources. All coastal areas for each tribe are considered economically significant, because fishing and other traditional uses span the length of coastline for each group.

Some Native American contacts within the North Coast planning area include:

Big Lagoon Rancheria

Virgil Moorehead, Chairperson

Yurok/Tolowa

P.O. Box 3060

Trinidad, CA 95570

Phone: (707) 826-2079

Elk Valley Rancheria of Smith River Tolowa

John Green, Chairperson

Tolowa

P.O. Box 1042

Crescent City, CA 95531

Phone: (707) 464-4680

Smith River Rancheria of California

William H. Richards, Sr., Chairperson

Tolowa

P.O. Box 239

Smith River, CA 95567

Phone: (707) 487-9255

Cher-Ae Heights Indian Community

Carol Ervin, Chairperson

Yurok/Miwok/Tolowa

P.O. Box 630

Trinidad, CA 95570-0630

Phone: (707) 677-0211

Tolowa Nation  
Audrey Bowen  
P.O. Box 213  
Fort Dick, CA 95538  
Phone: (707) 464-7332

Tolowa

Coast Indian Community  
Donald McCovey, President Yurok  
P.O. Box 529  
Klamath, CA 95548  
Phone: (707) 482-2431

Yurok Tribe of California  
Richard Haberman, Interim-Chairperson  
517 Third St, Suite 18  
Eureka, CA 95501  
Phone: (707) 444-0433

Yurok

Yurok Tribe of California  
Maria Tripp, Cultural Resources Representative  
P.O. Box 218  
Klamath, CA 95548  
Phone: (707) 482-2921

Yurok

Bear River Band of Rohnerville Rancheria  
Aileen Bowie-Meyer, Chairperson  
P.O. Box 108  
1736 Allared Avenue  
Eureka, CA 95502-0108  
Phone: (707) 443-6150

Wiyot/Mattole

Table Bluff Rancheria of Wiyot  
Albert E. James, Chairperson Wiyot  
P.O. Box 519  
Loleta, CA 95551  
Phone: (707) 733-5055

Sinkyone Wilderness Council  
Hawk Rosales  
190 Ford Road, #333  
Ukiah, CA 95482

Mattole Sinkyone

#### Historical and Archaeological Sites

California has many identified historical or archaeological sites of significance near marine waters of the State. The Office of Historic Preservation within the Department of Parks and Recreation, maintains the California Register of Historical Resources. The California State Lands Commission maintains a database of known shipwrecks and other underwater marine archaeologically significant resources in state waters. Provided below is a list of references for information about historical and archaeological sites at risk from marine oil spills.

**Office of Historic Preservation**

Department of Parks and Recreation

P.O. Box 942896

Sacramento, CA 94296-001

Fax: (916) 653-9824

Information Centers Coordinator: William Seidel

Phone: (916) 653-9125

State Inventory (structures): Jan Wooley

Phone: (916) 653-9019

**Resources Protection Division**

Department of Parks and Recreation

Sacramento, CA 94296-0001

Fax: (916) 653-4458

Senior State Archaeologist: John W. Foster

Phone: (916) 653-4529

**California State Lands Commission**

1807 Thirteenth Street

Sacramento, CA 95814

Fax: (916) 327-6674

Environmental Specialist: Kirk Walker

Phone: (916) 322-0530



## **ANNEX E AREA ASSESSMENTS**

### **APPENDIX VI DISPOSAL**

One of the major problems associated with an oil spill response is the disposal of collected product and contaminated cleanup materials, soil, and debris. Each category of waste has its own type of response and management problem. The following discussion presents a general approach to the management of the various types of wastes collected during an oil spill. The flow chart following this section (Figure E.VI.1) presents an encapsulated view of what types of waste are generated by an oil spill and the disposal options for each type.

#### **DISPOSAL OPTIONS**

**Crude oil and Refined Petroleum Products.** Under California law, material released or discharged to marine waters of the state are defined as waste. Once the final disposition of a specific waste is determined, the waste may be redefined as a product or material and no longer will be subject to waste management requirements.

Crude oil spilled to marine waters, recovered, and transported to a refinery will be considered a product and will not be subject to waste management regulations [California Health and Safety Code (CHSC), 25250.3]. The collected crude oil must be shipped to the refinery of original destination or a refinery that can accept the spilled crude oil. Refined petroleum products that are recovered from marine waters may also be handled as a product if they can be used for their originally intended purpose (i.e. fuel, fuel oil, etc.)(CHSC 25250.3).

There are other avenues by which recovered petroleum may be managed as a material (CHSC 25143.2). These approaches include recycling the petroleum through incineration, as a fuel, a substitute for raw material feedstock, or as an ingredient used in the production of a product (i.e. asphalt). The California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) should be consulted for more information on these and other management options.

State law requires the consideration of recycling, therefore recycling should be a top priority and will be undertaken if at all possible. The latest published list of companies that recycle oil is presented in Table E.VI.1 and the latest published list of licensed used oil haulers is presented in Table E.VI.2. A discussion of waste minimization and recycling options is included in this Appendix.

Recovered petroleum “products” that are not accepted by a refinery or that can not be recycled must be managed as a waste. In order that the appropriate management mechanism is determined for the recovered petroleum, the waste must be characterized by a state certified laboratory to determine if the waste is hazardous or non-hazardous. It is the responsibility of the Responsible Party (RP) to have the waste accurately characterized for proper disposition [Title 22, Sec. 66260.200(c) of the California Code of Regulations (22 CCR)].

**Disposal at Sea of Water Separated From Recovered Oil.** Oil recovered at sea typically contains significant amounts of sea water. In order to maintain the efficiency of the skimming process this water must be separated/decanted from the oil and discharged back to the ocean during recovery operations. Separated sea water typically contains elevated levels of hydrocarbons and thus the discharge of this material may constitute a discharge of a pollutant. This issue is presently being discussed with regulatory agencies to determine if a National Pollution Discharge Elimination System (NPDES) permit, or a waiver from the permit, is required before separated/decanted water may be discharged back into state waters. The “discharge” of separated/

decanted water is recognized by the USCG On-Scene Commander as an integral part of offshore skimming operations and as an excellent waste minimization tool. Therefore, the USCG OSC or his/her representative may authorize the discharge of separated/decanted water back into the catenary area of a boom/skimming system outside of State waters (3 miles). The exception to this will be in NOAA Marine Sanctuary waters.

With the addition of the Monterey Bay National Marine Sanctuary a significant portion of the coastline is now part of the National Marine Sanctuary program. Other sanctuaries include Point Reyes/Farallon Island, Channel Islands San Miguel, Santa Cruz, Santa Rosa, Anacapa, Santa Barbara Island, Richardson and Castle Rock), and Cordel Banks. Federal law prohibits the discharge of material, such as separated water, to marine sanctuaries unless permitted by the Administrator of the sanctuary program. Negotiations are presently under way seeking pre-approval to discharge separated waters during an emergency response to oil spills within the sanctuaries. Until pre-approval is obtained, a permit for the discharge of separated water must be obtained from the Assistant Administrator of the Sanctuary Program (202-606-4122) before any discharge can take place.

**Contaminated Debris.** Contaminated debris, including organic material, contaminated cleanup equipment (i.e. booms, pompoms, sorbents, etc.) and other contaminated materials that cannot be recycled must be managed as a waste. The materials must also be characterized before the appropriate waste management option is determined.

**Oiled Animal Carcasses.** Oiled animals and carcasses should be collected and turned over to the California Department of Fish and Game, Office of Oil Spill Prevention and Response (OSPR) representatives who are responsible for wildlife rehabilitation and collection of carcasses for natural resource damage assessment (NRDA) investigations (see Annex C, Appendix I, Tab D-Damage Assessment Procedures). The identification and location of OSPR representatives can be provided by the Unified Command Center. OSPR will be responsible for the disposal of the oil-contaminated carcasses.

## WASTE MINIMIZATION AND RECYCLING OPPORTUNITIES

**Debris Avoidance.** While it is generally not possible to avoid the generation of oily debris resulting from the contact of floating oil with waterborne solids, it is possible to avoid the generation of oily debris in the coastal intertidal zone if the anticipated area of oil impact can be cleaned prior to stranding of the spilled oil. This has been successfully accomplished in a small number of past spills (W. Schumaker, personal communication). Personnel can be deployed to remove debris from beach intertidal areas to above the high tide line in order to prevent oiling of stranded debris/trash. It is important to note that such crews are not likely to be certified as required under OSHA 1910.120 and can only perform this task prior to the stranding of spilled oil. A safety/industrial hygiene specialist (see Annex H) should be consulted regarding the limitations of these crews and the effective establishment of exclusion zones in the area of beach impact.

**Selection of Personal Protective Equipment.** Depending upon climatic conditions and material compatibilities of personal protective equipment (PPE), waste can be minimized through the selection of reuseable equipment, when possible. For instance, heavy gloves and boots which can be effectively decontaminated and reused can minimize the generation of oil-contaminated disposable gloves and boots as long as such equipment use is approved by the site safety officer. Reuseable rain gear may also be used instead of disposable suits, if approved. Such decisions should be made early in the response process in order to minimize generating containerized, contaminated PPE which is generally disposed at Class I facilities.

**Recovered Oil and Oily-water.** In order to maximize skimmer efficiency and effectiveness, water should be decanted to the spill impact area with the approval of the federal OSC and relevant state agency representa-

tives. Operational standards (e.g., decanting only in the impact area where water depth is sufficient; no free oil) should be established as soon as skimming is initiated. In federal waters, decanting can be approved through a request to the federal OSC. As discussed earlier, in State waters, approval must be secured from the Regional Water Quality Control Board.

Both oil and oily-water recovered from skimming operations should be offloaded to facilities where it can be effectively recycled/managed with established process and treatment streams. Such facilities would include terminals, refineries and commercial rerefiners/reclaimers/recyclers. These facilities can often provide temporary tank storage, when necessary. Oiled debris which is recovered with skimmed oil should be maintained in secure, temporary storage until it is sufficiently characterized for disposal.

**Sorbent Use/Reuse.** Synthetic sorbents (i.e., pads, sweeps, booms) have become standard response materials in the “mechanical recovery” of spilled oil. Their oleophilic, hydrophobic character makes them efficient at separating oil and water and they are routinely used to recover oil from solid surfaces as well (e.g., rubble, cobble and boulder shorelines; equipment/gear; vessels; etc.). Since oiled sorbent material often constitutes a substantial percentage of the oily solid waste generated during spill response and cleanup, opportunities for minimizing this waste volume should be considered.

Some sorbents are designed to be reuseable (i.e., mechanized rope-mop skimmers) or can be recycled onsite with inexpensive gear (e.g., appropriate barrel-mounted wringers). Sorbent manufacturers instructions should be followed regarding the limits of effective reuse for their individual products. It is also possible to replace sorbent sweeps and booms with recyclable boom and other appropriate gear in circumstances where floating oil can be efficiently recovered without generating oiled sorbents. For example, in good-access, low energy shoreline areas (harbors, bays, inlets), it may be possible to use containment-boom and recover the trapped oil with vacuum trucks instead of contaminating large volumes of sorbent.

**Petroleum-contaminated Soil Recycling and Reuse.** While the volume of petroleum-contaminated soil associated with coastal spills is generally lower than such volumes resulting from large inland spills, opportunities for recycling/reuse should be considered. For soils satisfying the waste profiling requirements of the state and commercial facilities, beneficial reuse as daily landfill cover after appropriate treatment is an available option in California (see Response Resources lists). Recycling of oil-contaminated soil as aggregate in cold-mix and hot batch asphalt is available at four facilities in the State of Washington (Nash, et. al, 1992). Furthermore, a recently completed study of the incorporation of oily/solid residuals into construction materials concluded that a large market exists in California and that these recycling/reuse opportunities should be pursued and encouraged (Mittelhauser Corporation, 1992).

It is important to note that both the costs and benefits of such recycling (less than \$100/ton and low future liability) versus disposal in a California Class I or II disposal facility (greater than \$100/ton and moderate to high future liability) are substantial.

Removal of contaminated soil from temporary storage will require authorization of the on-scene coordinator.

#### TEMPORARY STORAGE

To expedite removal of spilled oil, refined products, and contaminated material from marine waters during an emergency response, temporary storage sites may be erected at appropriate shore locations [CCR 66270.1(c)3]. The transportation of oil and contaminated material to temporary storage sites during the emergency response is exempt from handling and permitting requirements [Title 22, Sec. 66264.1(g)(8)]. The on-site California Environmental Protection Agency, Department of Toxic Substance Control (DTSC) representa-

tive or duty officer [(213) 255-2002] should be contacted for approval. If a Unified Command is established, OSPR will facilitate the contact with DTSC through their liaison function.

Temporary storage sites should be available at an onshore location convenient to the recovery operations to temporarily store recovered petroleum products and contaminated materials and debris. A temporary storage site may require an emergency permit from the California Coastal Commission. For information on temporary permits within the coastal zone, call the Emergency Resources Unit at (415) 904-5200.

Siting of the temporary facility must be done with the concurrence of the USCG and state OSC, DTSC, the local Regional Water Quality Control Board (RWQCB), and the local health, fire and emergency services departments. If a Unified Command is established, OSPR will facilitate the contact of the state and local government agencies through their liaison function.

Temporary storage facilities can include Baker tanks, tank trucks, oil drums, or empty fuel storage tanks. If suitable containers are not available, oily wastes may be temporarily stored in pits dug in the soil. These pits must be lined with plastic sheeting to prevent oil leakage and soil penetration.

### INITIAL TREATMENT

Petroleum and petroleum contaminated cleanup materials can potentially be treated at a temporary storage site. One of the treatment process that may be used is Transportable Treatment Units (TTU). The most likely treatment process undertaken with a TTU will be separation of sea water from collected petroleum. Another method employed for separating water is decanting water from temporary storage tanks.

Any water generated through the separation of petroleum and sea water may be potentially discharged to a sanitary sewer system or back to marine waters. The sanitary sewer discharge will require a permit from the local sanitation district which will establish effluent requirements for the discharged water. Should a sanitation district not allow the discharge of water to its system, the recovered sea water would either be discharged back to the adjacent marine waters or transported off-site for disposal. The discharge of recovered sea water to state waters will require a NPDES permit from the local RWQCB.

A portable incinerator may be another type of TTU available during a spill response for use with contaminated material. The use of an incinerator will require a permit from the local air quality agency. The potential use of any TTU and regulatory standards must be discussed with DTSC.

### CHARACTERIZATION OF RECOVERED MATERIAL

Recovered petroleum and contaminated debris not recycled must be characterized to determine their waste classification before the waste can be shipped to a proper waste management facility for final disposal. The actual testing may be conducted on representative samples of each type of waste by a State of California certified laboratory.

It is the responsibility of the generator/RP to have petroleum and contaminated material managed as waste accurately classified as hazardous or nonhazardous for proper disposition [22 CCR 66260.200(c)]. A generator who incorrectly determines and manages a hazardous waste is in violation of the hazardous waste requirements in 22 CCR and is subject to DTSC enforcement action.

Twenty-two CCR 66264.13 and 66265.13 states that before an owner or operator of a treatment, storage, or disposal facility transfers, treats or disposes of any hazardous waste, the owner or operator shall obtain a

detailed chemical and physical analysis of a representative sample of the waste. Characterization of the waste must be provided to DTSC (via profile sheet). The DTSC then designates the waste acceptable prior to shipment. State criteria for characterizing a waste hazardous or nonhazardous is found in 22 CCR 66261.10 and 66261.20-66261.24 while federal criteria is presented in 40 CFR 261.30-261.33 (see Figure E.VI.2). These criteria can apply to any oily-water, sorbents, booms, and debris generated as a result of an oil spill clean up. Based on waste characterization, the wastes can be further defined as either a Federal Resource Conservation and Recovery Act (RCRA) waste (hazardous waste regulated under federal regulations), non-RCRA waste (hazardous waste regulated under California regulations), or nonhazardous waste. Nonhazardous waste in this instance is defined as designated waste per 23 CCR 25522. Once the waste is characterized, disposition options can then be selected. Removal of recovered material from temporary storage will require the authorization of the on-scene coordinator.

## TRANSPORTATION

Recovered petroleum product not accepted at a refinery or recycling facility and contaminated material must be transported to an approved waste management facility. The type of waste management facility will be based on the results of the waste characterization performed.

**Hazardous Waste.** Waste classified as hazardous under either federal or state regulations must be transported to a permitted or interim status hazardous waste facility. Hauling of the waste must be done by a state licensed hazardous materials hauler. The licensed hauler must have a U.S. EPA I.D. number and State transporter I.D. number. Prior to removal of the hazardous material from temporary storage, a uniform hazardous waste manifest (form DHS-8022A) must be prepared by the generator (RP or his representative) for recovered petroleum and other contaminated materials (22 CCR 6626.20 - 6626.23). If assistance is required for manifesting, the RP may request it from the on-scene DTSC representative or the state DTSC duty officer (213-255-2075).

All hazardous materials shipped off-site must be transported in compliance with applicable regulations. These include the RCRA regulations in 40 CFR 262-263, DOT Hazardous Materials Regulations (49 CFR 171-178), and any applicable state regulations (22 CCR 6626.20-6626.23).

**Nonhazardous Waste.** Waste determined to be nonhazardous but designated waste (23 CCR 2522) will be transported to a Class II waste management facility. Manifesting of the waste is not required but a Bill of Lading is required for transportation. The appropriate Regional Water Quality Control Board (RWQCB, list in Table E.VI.3) and local health department should be contacted to determine what waste management facility will accept the waste and any additional test requirements the facility might require (see tables E.VI.4). Removal of nonhazardous waste from temporary storage will require authorization of the on-scene coordinator.

## WASTE MANAGEMENT FACILITIES

There are three licensed hazardous waste management facilities in California. They are:

- a. **Kettleman Hills Chemical Waste Management Co., Kettleman City (Kern County), California.**

Contact customer service at (209) 386-9711. They will provide name and number of local agent to contact for disposal information.

Only class I facility that accepts liquid waste in any sizable quantity. Liquid petroleum ac-

cepted at Kettleman Hills will be transported to their subsidiary in Azusa, California and further transported out-of-state for incineration.

**b. Laidlaw Environmental Services, Westmorland (Imperial County), California.**

Contact customer service at (619) 344-9400 for information. This facility will accept only solid waste.

**c. Laidlaw Environmental Services, Buttonwillow (Kern County), California.**

Contact customer service at (805) 762-7327. This facility accepts only solid waste although it is developing the ability to process small volumes of liquid waste.

**LITERATURE CITED**

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McKinley, A.A. Fate of Oil and Debris Recovered from Spill Cleanup Operations. 1991 International Oil Spill Conference Proceedings. 217-220.

Mittelhauser Corporation. Strategy Report: Incorporation of Oily/Solid Residuals into Construction Materials. Western States Petroleum Association. 1992. 25.

Nash, J.H., et. al. Potential Reuse of Petroleum-Contaminated Soil: A Directory of Permitted Recycling Facilities. USEPA Risk Reduction Laboratory (ORD). 1992. 37.

Schumaker, W. Chief of Beach Safety & Sanitation, L.A. County. 1993.

## **WASTE EVALUATION - FEDERAL CRITERIA**

Is the Material a Waste? (40 CFR 261.2)

A Solid Waste is an Abandoned, Recycled, or Inherently Waste-Like Discarded Material that is Not Specifically Excluded in 40 CFR 261.4.

Is the Waste Excluded from Regulation? (40 CFR 261.4)

Domestic Sewage Sludge Ash Wastes from the Combustion of Fossil Fuels.

Industrial Wastewater Subject to Regulation Under the Spent Sulfuric Acid Clean Water Act.

Certain Chromium Wastes Mining Overburden.

Mining Wastes.

Wastes from Conditionally Exempt Small Quantity Household Waste Generators.

Is the Waste a Listed Hazardous Waste? (40 CFR 261.30-33)

Wastes from Non-Specific Sources ("F" List)

Wastes from Specific Sources ("K" List)

Discarded Commercial Chemical Products, Oil Specification Species, Container Residues & Spill Residues Thereof ("P" & "U" Lists)

Is the Waste a Characteristic Hazardous Waste? (CFR 261.20-24)

Ignitability

- Liquid (Other than Aqueous With <24% Alcohol) with Flashpoint < 140 F
- Nonliquid Which Can Cause Fire and, When Ignited, Burns

Persistently and Vigorously

- Flammable Compressed Gas [49 CFR 173.300(b)]
- Oxidizer (49 CFR 173.151)

## WASTE EVALUATION - FEDERAL CRITERIA

### Corrosivity

- Aqueous Liquid with pH  $\leq 2$  or  $\geq 12.5$
- Liquid that Corrodes Steel  $\geq 6.35\text{mm/yr}$  at 55\_F

### Reactivity

- Normally Unstable - Generates Toxic Gases
- Reacts Violently - Contains Cyanides or Sulfides
- Explosive Mixtures - Detonates or Explodes

### Toxicity

- 40 Compounds have Assigned Regulatory Levels
- Samples Are Compared to the Regulatory Threshold After Being

Prepared Per the Toxicity Characteristic Leaching Procedure

Is the Hazardous Waste Mixed With a Nonhazardous Waste? (40 CFR 261.3)?

A Mixture of a Listed Hazardous Waste and a Nonhazardous Waste is a Hazardous Waste Unless:

- The *Listed* Waste Was Listed Merely Because it Exhibited a Characteristic and the Resultant Mixture No Longer Exhibits that Characteristic;

OR

- The Mixture is a Wastewater that is Discharged Pursuant to Specific Provisions of the Clean Water Act

A Mixture of a *Characteristic* Hazardous Waste and a Nonhazardous Waste Only if the Resultant Mixture Exhibits a Characteristic

Is the Waste a “Derived From” Waste? [40 CFR 261.3 (c)]

Any Solid Waste Generated From the Treatment, Storage, or Disposal of a Hazardous Waste Unless is a Hazardous Waste Unless the Waste is Specifically Excluded or Does Not Exhibit a Characteristic and is Not Derived From a Listed Waste.



## WASTE EVALUATION - STATE CRITERIA

Is the Material a Waste? (HSC 2412.4)

A Waste is Discarded Material that is Not Specifically Excluded

*A Discarded Material* is Relinquished, Recycled, or  
Inherently Waste-Like

Is the Waste Listed in Appendix 10? (22 CCR, Division 4.5, Appendix X)

Wastes Listed in Appendix 10 Are Presumed Hazardous  
Unless Proven Otherwise by Applying Knowledge of or  
Testing the Characteristics of the Wastestream.

Is the Waste a Characteristic Hazardous Waste? (22 CCR 66261.21-24)

Ignitability (22 CCR 66261.21)

- Identical Criteria to Federal Characteristics

Corrosivity (22 CCR 66261.22)

- Identical Criteria to Federal Characteristics Except  
That California Regulates Non-Aqueous Wastes In Addition  
to Aqueous Wastes

Reactivity (22 CCR 66261.23)

- Identical Criteria to Federal Characteristics

Is the Waste a Characteristic Hazardous Waste? (Cont.)

Toxicity (22 CCR 6626.24)

- Persistent and Bioaccumulative Substances
- A Waste is Hazardous if the Soluble Concentration of a  
Substance is  $\geq$  its Regulatory Threshold Known as the  
Soluble Threshold Limit Concentration (STLC). The  
Soluble Concentration is Determined After Preparing  
the Samples with the Waste Extraction Test (WET)
- A Waste is Hazardous if the Total Concentration of a  
Substance is  $\geq$  its Regulatory Threshold Known as the  
Total Threshold Limit Concentration
- Acute Toxicity
- Oral LD<sub>50</sub> <5,000 mg/kg (single administration). Test species is the rat.

## WASTE EVALUATION - STATE CRITERIA

- Dermal LD  $<4,300$  mg/kg (24 hour time period). Test species is the <sup>60</sup>rabbit.
- Inhalation LC  $<10,000$  ppm as a gas or vapor (8 hour time period). Test species is the <sup>50</sup>rat.
- Aquatic Toxicity
  - LC  $<500$  mg/l
  - 96 <sup>50</sup>Hour Bioassay
  - Test species are either fathead minnows, golden shiners, or rainbow trout.
- Chronic Toxicity
  - 16 Listed Carcinogens  $\geq 0.001\%$  (by weight)
  - A Waste Which Has Been Shown Through Experience or Testing to Pose a Hazard to Human Health or the Environment Because of its Carcinogenicity, Acute Toxicity, Bioaccumulative Properties or Persistence in the Environment.

Is the Waste a Used Oil? (HSC 25250-25250.25)

Any Refined Crude Oil Which Has Become Contaminated With Physical or Chemical Impurities as a Result of Use

Any refined Crude Oil Which is No Longer Useful to the Original Purchaser as a Consequence of Extended Storage, Spillage, or Contamination

Spent Lubricating Fluids

Spent Industrial Oils

Contaminated Fuel With a Flashpoint  $\geq 100_F$

Is the Waste an Extremely Hazardous Waste? (22 CCR 66261.110)

Acute Toxicity

- Acute Oral LD  $\leq 50$  mg/kg<sub>60</sub>
- Acute Dermal LD  $\leq 43$  mg/kg<sub>50</sub>
- Acute Inhalation LC  $\leq 100$  ppm<sub>50</sub>

Listed Carcinogen  $\geq 0.1\%$  (by weight)

Contains a Persistent or Bioaccumulative Substance at  $\geq$   
Listed TTLC  
Water Reactive

## WASTE EVALUATION - STATE CRITERIA

Is the Waste a Special Waste? (22 CCR 66261.122)

A Special Waste is Hazardous ONLY Because Inorganic Constituents Exhibit:

- Soluble Concentration > STLC

*OR*

- Total Concentration > TTLC

*EXCEPT THAT*

- Soluble Concentration in mg/kg *must be* < TTLC

The Generator Must Apply For and Receive the Special  
Waste Classification From the Department.

Is the Hazardous Waste Mixed with A Non-Hazardous Waste?  
[22 CCR 66261.3(b)(3)]

A Mixture of Hazardous Waste and a Non-Hazardous Waste is  
Hazardous Waste Only if the Resultant Mixture Exhibits an Article 3 Characteristic

## **LIST OF LICENSED USED OIL HAULERS IN CALIFORNIA**

| <b><u>COMPANY NAME</u></b>  | <b><u>LOCATION</u></b> | <b><u>PHONE NUMBER</u></b> |
|-----------------------------|------------------------|----------------------------|
| A. Ellison Co.              | Los Angeles            | (213) 723-1411             |
| A.D. Barnum Used Oil Hauler | Los Angeles            | (213) 591-2310             |
| Action Cleaning Corp.       | San Diego              | (619) 233-1881             |
| Action Oil Co.              | San Jose               | (408) 244-6444             |
| Action Oil Recycling        | Santa Monica           | (213) 545-4177             |
| Agresco Oil Co.             | Los Angeles            | (213) 660-4780             |
| Alameda Oil Co.             | Los Angeles            | (213) 737-5701             |
| Alkire Fleet Lube Service   | Sacramento             | (916) 485-9870             |
| All American Oil            | Pleasanton             | (415) 484-2470             |
| All American Oil Co.        | Los Angeles            | (213) 778-0135             |
| Allied Oil and Pumping      | Saratoga               | (408) 263-2222             |
| Allied Petroleum            | Hilmar                 | (209) 576-8500             |
| Alviso Independent Oil      | Alviso                 | (408) 262-2715             |
| Amberwick Corp.             | Long Beach             | (213) 426-6504             |
| American Oil Co.            | Los Angeles            | (213) 469-2277             |
| Artesian Oil Recovery       | Oakland                | (415) 839-4234             |
| Ashbury Oil Co.             | Compton                | (213) 321-1392             |
| Aztec Oil                   | San Diego              | (619) 298-1610             |
| B.O.R. Industries           | West Sacramento        | (916) 372-2342             |
| Balakian Drain Oil          | Parlier                | (209) 888-2682             |
| Base Oil Service            | Fontana                | (714) 350-1840             |
| Bay Area Oil Recycling      | Pacifica               | (415) 359-0469             |
| Bayshore Oil Co.            | Redwood City           | (415) 366-6146             |
| Blach Gold Industries       | Ventura                | (805) 643-1634             |
| Blair Drain Oil             | Huntington Beach       | (714) 847-7892             |
| Bricyn Oil Co.              | Bakersfield            | (805) 395-0665             |
| C.A.L. Oil                  | Signal Hill            | (213) 595-8154             |
| C.M.D. Oil                  | Hesperia               | (619) 949-0653             |
| California Crude            | Costa Mesa             | (714) 631-6304             |
| California Oil Recyclers    | San Carlos             | (415) 591-2603             |

| <b><u>COMPANY NAME</u></b>   | <b><u>LOCATION</u></b> | <b><u>PHONE NUMBER</u></b> |
|------------------------------|------------------------|----------------------------|
| California Oil Refinery      | Riverside              | (714) 687-4307             |
| Central Pumping Co. Inc.     | La Habra               | (213) 694-5422             |
| Chico Drain Oil Service      | Chico                  | (916) 345-9043             |
| Chico Pumping                | Diamond Bar            | (714) 623-2866             |
| Cole's Services              | Bakersfield            | (805) 397-3962             |
| Cousin's Waste Oil           | Whittier               | (213) 947-4142             |
| Crane's Waste Oil            | Lake Isabella          | (619) 379-4377             |
| Diamond Oil Service          | San Luis Obispo        | (805) 543-4977             |
| Dodson Oil Co.               | Victorville            | (619) 243-1794             |
| Dunlap Waste Oil             | Thousand Palms         | (619) 564-4951             |
| E & J Drain Oil Service      | Compton                | (231) 638-4493             |
| Erickson Inc                 | Richmon                | (510) 235-1393             |
| Express Oil Co.              | Los Angeles            | (213) 586-9399             |
| Frank W. Anderson            | Calexico               | (619) 357-3487             |
| G.I. Pumping Inc             | Whittier               | (213) 946-2771             |
| Gardner's Drain Service      | Healdsburg             | (707) 433-3830             |
| Glenco Oil Co. Inc.          | Bakersfield            | (805) 395-0665             |
| Golden West Oil Co. Inc.     | Bloomington            | (714) 350-3252             |
| Gottlieb Waste Oil Co.       | Concord                | (415) 671-2566             |
| H & H Ship Service           | San Francisco          | (415) 543-4835             |
| Haber Oil Products           | Pleasant Hill          | (415) 935-3800             |
| Hedrick Distribution Inc.    | Santa Cruz             | (408) 427-3773             |
| Hydro-Chem Services Inc.     | San Francisco          | (415) 822-1181             |
| Industrial Services Co.      | Los Angeles            | (213) 262-9747             |
| Industrial Waste Oil         | Costa Mesa             | (714) 496-2773             |
| Industrial Waste Utilization | Brea                   | (213) 690-0315             |
| Interstate Oil               | Chino                  | (714) 597-6484             |
| Island Oil Co.               | Valinda                | (818) 918-4591             |
| IT Corporation               | Torrance               | (213) 378-9933             |
| J & B Waste Oil              | La Habra               | (213) 691-0447             |
| J. Bennett Oil Co., Inc.     | Riverside              | (714) 687-4307             |
| <b><u>COMPANY NAME</u></b>   | <b><u>LOCATION</u></b> | <b><u>PHONE NUMBER</u></b> |
| J.C. Liquid Waste Disposal   | Los Angeles            | (213) 268-3137             |

|                               |                  |                |
|-------------------------------|------------------|----------------|
| J.C.'s Grease Buyers          | Norco            | (714) 736-1198 |
| J.D. Wallace                  | Ontario          | (714) 988-8864 |
| J.M.T. Oil Co., Inc.          | Newhall          | (805) 259-8920 |
| J.W. Butler Oil, Inc.         | Lancaster        | (805) 946-2420 |
| J.W.A. Oil Co.                | Benicia          | (415) 481-2288 |
| Jack Stone Drainage Oil Co.   | Long Beach       | (213) 427-7216 |
| Jim Knight Drain Oil Service  | Long Beach       | (213) 434-2419 |
| K.S. Waste Oil Co.            | Long Beach       | (213) 731-7718 |
| Ken's Oil Co, Inc.            | Garden Grove     | (714) 534-8841 |
| King & King Drain Oil Service | Long Beach       | (213) 439-8500 |
| King Oil Co.                  | Hercules         | (415) 233-7200 |
| LA Glen Co.                   | Carson           | (213) 770-0983 |
| Leach Oil Co., Inc.           | Compton          | (213) 323-0226 |
| Louis Alarcon Waste Oil Serv. | Pico Rivera      | (213) 695-3476 |
| Lubrication Co. of America    | Los Angeles      | (213) 264-1091 |
| M.C. Nottingham Co of So Cal. | El Monte         | (818) 286-3104 |
| Mark Alarcon Waste Oil Serv.  | Pomona           | (714) 596-6177 |
| Morgan Chemical Inc.          | San Francisco    | (415) 822-7733 |
| NELCO Oil Refining Corp.      | National City    | (619) 474-7511 |
| Oasis Pumping                 | Whittier         | (213) 944-5225 |
| Offshore Crane & Service      | Ventura          | (805) 648-3348 |
| Oil Conservation Serv., Inc.  | Fresno           | (209) 485-5495 |
| Oil Inc. DBA Oil Process Co.  | Los Angeles      | (213) 585-5063 |
| Omega Waste Oil Service       | Pomona           | (714) 594-4843 |
| Otto Sprenger                 | Norwalk          | (213) 864-1197 |
| Pacific Coast Oil Co.         | Garden Grove     | (714) 539-7002 |
| Pacific Fuel Service          | Rancho Cucamonga | (714) 980-1537 |
| Pacific Used Oil Service      | Anaheim          | (213) 595-8154 |
| Pen Transportation            | Anaheim          | (213) 595-8514 |
| Petro Transportation          | Signal Hill      | (213) 595-7431 |
| Prompt Oil co.                | Signal Hill      | (213) 595-6597 |
| R&R Industrial Waste Haulers  | Los Angeles      | (213) 757-0128 |

| <b><u>COMPANY NAME</u></b>    | <b><u>LOCATION</u></b> | <b><u>PHONE NUMBER</u></b> |
|-------------------------------|------------------------|----------------------------|
| R. B. Enterprises             | Ridgecrest             | (619) 375-7727             |
| R.C.A. Oil Recovery           | Newark                 | (415) 793-0420             |
| Ramos Oil Recyclers           | West Sacramento        | (916) 371-2570             |
| Refineries Services, Inc.     | Patterson              | (209) 892-6742             |
| Reserve Fuel Services         | Upland                 | (714) 981-2666             |
| Roadwest Oil Company          | Whittier               | (213) 693-9881             |
| Roaring Camp, Inc.            | Felton                 | (408) 355-4484             |
| Rosemead Oil Production, Inc. | Santa Fe Springs       | (213) 941-3261             |
| Rozuk's Oil and Vacuum, Inc   | South El Monte         | (818) 443-6744             |
| Rutherford/Pacific, Inc       | Compton                | (213) 637-1240             |
| Salvage Oil Services          | Long Beach             | (213) 422-8358             |
| Santa Clara Valley Oil        | San Jose               | (408) 259-5567             |
| Sheldon Oil Co.               | Suisun                 | (707) 425-2951             |
| Shields Oil Co., Inc.         | Covina                 | (714) 629-8985             |
| Southland Oil, Inc.           | Norwalk                | (213) 266-1484             |
| Southwest Trails              | Long Beach             | (213) 538-5730             |
| Spectrum Chem. Solvents & Oil | Long Beach             | (213) 737-7710             |
| Speed's Oil Tool Serv., Inc.  | Santa Maria            | (805) 925-1369             |
| Talley Brother, Inc.          | Huntington Park        | (213) 587-1217             |
| Trans West Oil                | Signal Hill            | (213) 426-0836             |
| Triad Marine & Oil Cleaning   | San Diego              | (619) 239-2024             |
| U.S. Waste Oil Corp.          | San Ramon              | (415) 829-5288             |
| W-H Tank Lines, Inc.          | Long Beach             | (213) 427-3109             |
| Waste Oil Recovery System     | Oakland                | (415) 533-0750             |
| Western Asphalt Services      | Bakersfield            | (805) 327-0413             |
| Williams Tank Lines           | Stockton               | (209) 944-5613             |



# Annex F

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## **ANNEX F SUMMARY OF AREA RESOURCES**

This Annex contains information on oil spill cleanup equipment, logistics, as well as personnel and information resources. Appendix I is a listing of spill cleanup equipment arranged alphabetically by organization. Equipment from all three of the OPA90 planning areas within the San Francisco Bay COTP zone is included. A matrix precedes each listing indicating what organizations and equipment types are in that area. For use in estimating response times over land and sea, Figures F-I-1 and F-I-2 provide mileage information between key cities. Following each matrix is an area equipment summary page. Finally there is a list of major oil-spill cleanup organizations for cascading equipment into our COTP zone. (NOTE: This list of cascading equipment is not intended to be all-inclusive, the NSFCC national database will serve that purpose.) This appendix does not provide information on generic equipment used in a response such as hand tools, bulldozers, etc. since such equipment is readily available on the commercial market and from state and local agencies. This plan does not intend to replace the yellow pages or county oil-spill contingency plans.

Appendix II is arranged in accordance with the requirements of COMDTNOTE 16471 dated 30 Sept 92. Most of the information was obtained from the local county oil-spill plans.

Finally, Appendix III provides personnel and information resources in database format.

## **APPENDIX I EQUIPMENT**

This appendix provides a comprehensive listing of all equipment specifically useful for oil-spill cleanup within San Francisco Bay's COTP zone. This information is broken down by planning area, by organization and by equipment type. The San Francisco Bay & Delta Area is further divided due to the large number of organizations within their area. The equipment is broken down into the following categories:

- 1 Boom Systems
- 2 Skimmers
- 3 Boats
- 4 Barges/Storage
- 5 Vacuum Trucks
- 6 Sorbents
- 7 Portable Pumps
- 8 Cargo Transfer Pumps
- 9 Communications Equipment
- 10 Electrical (Generators)
- 11 Dispersants
- 12 Mobile Command Posts

The next few pages describe the information that is incorporated into the fields for each category of equipment. Areas that are not described are self-explanatory or were already addressed.

## **1. BOOM SYSTEMS**

| 1. SVC | 2. Type | 3. Make/Model | 4. Sections | 5. Length<br>5'/100' | 6. Length<br>Ded. to<br>Facility | 7. End<br>Conn. | 8. Flotation | 9. Skirt<br>Length | 10. Disp.<br>Time |
|--------|---------|---------------|-------------|----------------------|----------------------------------|-----------------|--------------|--------------------|-------------------|
| Ocean  |         |               |             |                      |                                  |                 |              |                    |                   |
| Inland |         |               |             |                      |                                  |                 |              |                    |                   |
| River  |         |               |             |                      |                                  |                 |              |                    |                   |

1. Service - Identifies intended operating area including open ocean, inland, or river. However, this “service type” is flexible in some cases.
2. Type - This further describes the boom. (inflatable, foam, fence, curtain, etc.)
3. Make/Model - This identifies the company or specific brand.
4. Sections - This describes the lengths that the boom is folded in when storing it and the individual lengths of boom between connectors.
5. Length - The total amount of this particular kind of boom.
6. Length Dedicated to Facility - This is the amount of boom required to be resident at the facility per their federal response plan.
7. End Connector - This is described in more detail following this section. It refers to the different devices used to connect like sections of boom.
8. Flotation Diameter - This refers to the diameter of the flotation device attached above the skirt.
9. Skirt Length - The length of boom section (skirt) located below the waterline.
10. Dispatch Time - The amount of time for the equipment to be loaded and enroute from the storage location.

## **2. SKIMMERS**

| TYPE | MAKE/MODEL | LOCATION | # UNITS | 1.RECOVERY<br>(BBL/DAY) | 2.STORAGE<br>CAP (BBL) | DISPATCH<br>TIME |
|------|------------|----------|---------|-------------------------|------------------------|------------------|
|------|------------|----------|---------|-------------------------|------------------------|------------------|

1. Recovery - The derated capacity of oil that a skimmer will recover in barrels per day. (Derated is defined in 33 CFR 154, Appendix C-6.2.1 as 20% of the nameplate recovery capacity.)
2. Storage Capacity - The maximum amount of storage space available for recovered product.

## **4. BARGES/STORAGE**

| TYPE | MAKE/MODEL/NAME | LOCATION | # UNITS | 1.AMPLIFYING<br>INFORMATION | STORAGE<br>CAP (BBL) | DISPATCH<br>TIME |
|------|-----------------|----------|---------|-----------------------------|----------------------|------------------|
|------|-----------------|----------|---------|-----------------------------|----------------------|------------------|

1. Amplifying Information - Any additional information about the piece of equipment.

## **7. PORTABLE PUMPS**

| TYPE | MAKE/MODEL | LOCATION | NUMBER<br>UNITS | 1.POWER<br>SOURCE | 2.FITTING<br>SIZE | RATED<br>GPM | DISPATCH<br>TIME |
|------|------------|----------|-----------------|-------------------|-------------------|--------------|------------------|
|------|------------|----------|-----------------|-------------------|-------------------|--------------|------------------|

1. Power Source - This defines what drives the pump (hydraulic, pneumatic, electric, gas, etc.).
2. Fitting Size - Refers to the suction side of the pump.

The following two pages describe the different kinds of connector types that booms have. **The letter assigned to the boom connector corresponds to the letter that appears in the equipment lists.**

---

## SAN FRANCISCO BAY & DELTA RESPONSE EQUIPMENT TOTALS

BOOM: 190,005 feet  
SKIMMERS: 83  
BOATS: 168  
TUGS: 46

BARGES: 41  
LANDING CRAFT: 2  
SLED: 1

---

NOTE: The summaries include both private and government resources and combines all types of systems.

- 1 Boom Systems
- 2 Skimmers
- 3 Boats
- 4 Barges/Storage
- 5 Vacuum Trucks
- 6 Sorbents
- 7 Portable Pumps
- 8 Cargo Transfer Pumps
- 9 Communications Equipment
- 10 Electrical (Generators)
- 11 Dispersants
- 12 Mobile Command Posts

# SAN FRANCISCO BAY & DELTA

| ORG. VS EQUIPMENT     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| OSRO's                |   |   |   |   |   |   |   |   |   |    |    |    |
| CLEAN BAY             | X | X | X | X |   | X | X | X | X | X  | X  | X  |
| ERICKSON, INC.        |   |   |   | X | X | X | X | X |   |    |    |    |
| EVERGREEN ENVIRON.    |   | X |   |   | X | X |   |   |   | X  |    | X  |
| GIBSON ENVIRONMENTAL  | X | X |   | X |   | X | X |   |   |    |    |    |
| H&H ENVIRONMENTAL LAB | X | X | X | X | X | X | X |   |   | X  |    |    |
| LAIDLAW ENVIRONMENTAL |   |   |   |   | X |   |   |   |   |    |    |    |
| MARCOR ENVIRON SVC    |   |   |   |   | X |   |   |   | X | X  |    |    |
| MSRC                  | X | X | X | X |   | X | X | X | X | X  |    | X  |
| PACIFIC LINK ENVIRON  | X | X | X |   |   | X | X | X | X |    |    |    |
| RIEDEL ENVIRON SVC    | X | X |   |   |   | X | X | X |   |    |    |    |
| SAN FRAN MARINE       | X |   |   |   |   | X |   |   |   |    |    |    |
| US POLLUTION CONT INC |   |   |   | X | X | X |   |   |   |    |    | X  |
| FACILITIES            |   |   |   |   |   |   |   |   |   |    |    |    |
| ARCO RICHMOND TERM    | X |   | X | X |   | X |   |   |   |    |    |    |
| BAY/DIABLO PETROL CO  |   |   |   |   |   | X |   |   |   |    |    |    |
| CASTROL, INC.         | X |   |   |   |   | X |   |   |   |    |    |    |
| CHEVRON USA RICHMOND  | X |   | X |   |   | X |   |   |   |    |    |    |
| HUNTWAY REFINING FAC  | X |   | X |   |   | X |   |   |   |    |    |    |

# SAN FRANCISCO BAY & DELTA (CONTINUED)

| ORG. VS EQUIPMENT     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| PACIFIC REFINING CO   | X |   | X |   |   | X |   |   | X |    |    |    |
| PENNZOIL PKG PLANT    | X |   | X |   |   |   |   |   |   |    |    |    |
| SHELL OIL MARTINEZ    | X |   | X |   | X | X |   |   | X | X  |    | X  |
| TEXACO OIL TERMINAL   | X | X | X |   |   | X |   |   |   | X  |    |    |
| TIME OIL COMPANY      | X |   | X |   |   | X |   |   | X |    |    |    |
| TOSCO AVON REFINERY   | X |   | X |   | X | X |   |   | X | X  |    |    |
| UNOCAL RICHMOND       | X |   | X |   |   |   |   |   |   |    |    |    |
| UNOCAL SAN FRANCISCO  | X | X |   |   |   | X |   |   | X |    |    |    |
| WICKLAND OIL CROCKETT | X |   |   |   |   |   |   |   |   |    |    |    |
| WICKLAND OIL MARTINEZ | X |   |   |   |   | X | X |   |   |    |    |    |
| FEDERAL AGENCIES      |   |   |   |   |   |   |   |   |   |    |    |    |
| ARMY CORPS OF ENG.    |   |   | X |   |   |   |   |   |   |    |    |    |
| CG MARINE SAFETY DET  | X |   | X |   |   | X |   |   |   |    |    | X  |
| CG MARINE SAFETY OFF  |   |   | X |   |   |   |   |   | X |    |    | X  |
| CG PACIFIC STRIKE TM  | X | X | X | X |   |   | X | X | X | X  |    | X  |
| NAVY WEAP STAT CON    | X | X | X |   |   |   |   |   |   |    |    |    |

# SAN FRANCISCO BAY & DELTA (CONTINUED)

| ORG. VS EQUIPMENT     | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|-----------------------|---|---|---|---|---|---|---|---|---|----|----|----|
| NAVY MOFFET FIELD     | X | X | X |   |   |   |   |   |   |    |    |    |
| NAVY FISC - PT MOLATE | X |   | X | X | X | X | X |   | X |    |    |    |
| NAVY ROUGH&READY ISL  | X |   | X |   |   | X |   |   | X | X  |    |    |
| NAVY GLOBAL - SUPSALV | X | X | X | X |   |   | X | X |   | X  |    | X  |
| NAVY TREASURE ISLAND  | X | X | X | X | X | X | X |   |   |    |    |    |
| SUISUN BAY RES FLEET  | X |   | X |   |   | X |   |   | X | X  |    | X  |
| LOCAL AGENCIES        |   |   |   |   |   |   |   |   |   |    |    |    |
| ALAMEDA SHERIFF, OES  |   |   | X |   |   |   |   |   | X | X  |    | X  |
| BETHEL ISL FIRE PROT  |   |   |   |   |   | X |   |   |   |    |    |    |
| SAN JOAQUIN FPD       |   |   | X |   |   |   |   |   |   |    |    |    |
| SAN RAMON VALLEY FIRE |   |   | X |   |   |   |   |   |   |    |    |    |
| SAUSALITO FIRE DEPT   |   |   | X |   |   |   |   |   |   |    |    |    |
| MISCELLANEOUS         |   |   |   |   |   |   |   |   |   |    |    |    |
| AAT VACUUM SERVICE    |   |   |   |   | X |   |   |   |   |    |    |    |
| ALLIED MARINE SERVICE |   |   | X |   |   |   | X |   |   | X  |    |    |
| ALL WASTE RESPONSE    | X | X |   | X | X | X | X |   |   | X  |    |    |
| BAKER TANKS           |   |   |   | X |   |   |   |   |   |    |    |    |
| B.O.R. INDUSTRIES     |   |   |   |   | X | X |   |   |   |    |    |    |
| BUCCANEER DIVE&CONSTR |   |   | X |   |   |   | X |   |   |    |    |    |

SAN FRANCISCO BAY & DELTA (CONTINUED)

| <b>ORG. VS EQUIPMENT</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>6</b> | <b>7</b> | <b>8</b> | <b>9</b> | <b>10</b> | <b>11</b> | <b>12</b> |
|--------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|
| CAL-BAY INDUSTRIAL       |          |          | X        |          |          |          |          |          |          |           |           |           |
| CONCORD CRANE & RENT     |          |          |          |          | X        |          |          |          |          |           |           |           |
| DEFENSE FUEL SPRT PT     | X        |          |          |          |          | X        | X        |          | X        | X         |           |           |
| DELTA OIL FIELD SVC      |          |          |          | X        | X        |          |          |          |          |           |           |           |
| DUTRA CONSTRUCTION       |          |          |          |          |          |          | X        |          |          |           |           |           |
| GULF OF FARALLONES       |          |          | X        |          |          |          |          |          |          |           |           |           |
| N.G. CHEMICAL            |          |          |          |          | X        | X        |          |          |          |           |           |           |
| O.H.M. REMEDIATION       |          |          | X        | X        | X        | X        |          |          |          |           |           |           |
| OIL CONSERVATION SVC     |          |          |          | X        | X        | X        |          | X        |          |           |           |           |
| PACO                     |          |          |          |          |          |          | X        |          |          | X         |           |           |
| PORT OF STOCKTON         | X        |          | X        |          |          | X        | X        |          | X        |           |           |           |
| PRC-PATTERSON, DBA       |          |          |          |          | X        | X        | X        | X        | X        |           |           |           |
| ROMBERG CENTER           |          |          | X        |          |          |          |          |          |          |           |           |           |
| RUST CORPORATION         |          |          |          |          | X        |          | X        |          |          | X         |           |           |
| SAUSALITO TOWING         | X        |          | X        |          |          | X        | X        | X        | X        | X         |           |           |
| SEARIVER MARITIME INC    | X        |          |          |          |          |          |          |          |          |           |           |           |



AAT Vacuum Service

| Equipment Type    | Type  | Make/Mod | Location      | Dispatch Tim | # of Unit | Storage Cap.(bbl | Info |
|-------------------|-------|----------|---------------|--------------|-----------|------------------|------|
| Vacuum Trucks     | Truck | Martin   | Yard - Mader  | 1 Hr.        | 1         | 40               | None |
| Boom              | Harbo | II       | PSI           | Trailer      | 1 Hr.     |                  |      |
| Boom              | Harbo | II       | Texaboom      | Trailer      | 1 Hr.     |                  |      |
| Boats             |       | Boat     | Boston Whaler |              | 2 Hr.     |                  |      |
| Sorbents          |       | Boom     | Absorbent     |              | 2 Hr.     |                  |      |
| Sorbents          |       | Rolls    | 3M            |              | 2 Hr.     |                  |      |
| Sorbents          |       | Pads     | 3M            |              | 2 Hr.     |                  |      |
| Mobile Command Po |       | Motor Ho | Mini Armory   |              | 2 Hr.     |                  |      |

Alameda Sheriff's Deparment OES

| Equipment Type | Type | Make/Model | Location   | Length | Horsepow | Crew | Draft | Fuel | Dispatch Tim | # of Units |
|----------------|------|------------|------------|--------|----------|------|-------|------|--------------|------------|
| Boats          | Boat | Munson     | Trailerred | 18'    | 170      | 3    | 2     | Gas  | 1/2 Hr.      | 1          |
| Boats          | Boat | Munson     | Trailerred | 16'    | 70       | 3    | 2     | Gas  | 1/2 Hr.      | 1          |
| Boats          | Boat | Munson     | Trailerred | 12'    | 60       | 3    | 1     | Gas  | 1/2 Hr.      | 1          |

| Equipment Type | Type  | Make/Model  | Location            | Dispatch Tim | # of Units | Info | Frequency |
|----------------|-------|-------------|---------------------|--------------|------------|------|-----------|
| Comms          | Radio | C.G. Bands  | Aboard 16' Boat     | 1 Hr.        | 1          | None | Several   |
| Comms          | Radio | 320 Channel | Clean Bay - Concord | 1 Hr.        | 2          | VHF  | Several   |
| Comms          | Radio | 320 Channel | Clean Bay - Concord | 1 Hr.        | 2          | UHF  | Several   |
| Comms          | Radio | 320 Channel | Clean Bay - Concord | 1 Hr.        | 2          | HF   | Several   |
| Comms          | Radio | 15 Channel  | Clean Bay - Concord | 1/2 Hr.      | 2          | None | Several   |
| Comms          | Radio | 2 Channel   | Clean Bay - Concord | 1/2 Hr.      | 2          | None | Several   |

| Equipment Type        | Type      | Make/Model | Location          | Dispatch Tim | # of Units | Info    | Power Sour | Rated Amps |
|-----------------------|-----------|------------|-------------------|--------------|------------|---------|------------|------------|
| Electrical Generators | Generator | GE         | On Vehicle R-1252 | 4 Hr.        | 1          | 110/220 | Diesel     | 20         |
| Electrical Generators | Lights    | Halogen    | On Vehicle R-1252 | 4 Hr.        | 1          | None    | Electric   | 12         |

| Equipment Type      | Type        | Make/Model            | Location             | Dispatch Tim | # of Units | Info |
|---------------------|-------------|-----------------------|----------------------|--------------|------------|------|
| Mobile Command Post | Van on Truc | State OES CMD/COM Van | On 28' Bostailed Tru | 4 Hr.        | 1          | None |
| Mobile Command Post | Trailer     | 24' Command Post      | San Leandro          | 4 Hr.        | 1          | None |

**All Waste Response**

| Equipment Type        | Type      | Make/Model      | Location            | Dispatch Time       | # of Units    | Storage Cap  | Info         |            |       |           |          |
|-----------------------|-----------|-----------------|---------------------|---------------------|---------------|--------------|--------------|------------|-------|-----------|----------|
| Barges/Storage        | Tank      | Poly Tank       | All Waste - Benicia | 1 Hr.               | 2             | 750          | None         |            |       |           |          |
| Barges/Storage        | Tank      | Poly Tank       | All Waste - Benicia | 1 Hr.               | 1             | 200          | None         |            |       |           |          |
| Barges/Storage        | Tank      | Poly Tank       | All Waste - Benicia | 1 Hr.               | 10            | 170          | None         |            |       |           |          |
| Equipment Type        | Service   | Type            | Make/Model          | Location            | Sections      | Length       | Connector    | Flotation  | Skirt | Transport | Dispatch |
| Boom                  | River     | Foam            | Unknown             | All Waste - Benicia | 6'/100'       | 500'         | b            | 6"         | 12"   | Pallets   | 1 Hr.    |
| Equipment Type        | Type      | Make/Model      | Location            | Dispatch Time       | # of Units    | Info         | Power Source | Rated Amps |       |           |          |
| Electrical Generators | Generator | GE              | All Waste - Benicia | 1 Hr.               | 1             | None         | Diesel       | 4          |       |           |          |
| Electrical Generators | Generator | GE              | All Waste - Benicia | 1 Hr.               | 1             | w/lights     | Diesel       | 4          |       |           |          |
| Electrical Generators | Generator | GE              | All Waste - Benicia | 1 Hr.               | 1             | None         | Diesel       | 10         |       |           |          |
| Electrical Generators | Lights    | Air             | All Waste - Benicia | 1 Hr.               | 3             | Expl prf     | Electricity  | N/A        |       |           |          |
| Equipment Type        | Type      | Make/Model      | Location            | Dispatch Time       | # of Units    | Power Source | Fitting Size | GPM        |       |           |          |
| Portable Pumps        | Diaphram  | Weldin M - 15   | All Waste - Benicia | 1 Hr.               | 50            | Air          | 4"           | Various    |       |           |          |
| Portable Pumps        | Diaphram  | Weldin M - 8    | All Waste - Benicia | 1 Hr.               | 20            | Air          | 4"           | Various    |       |           |          |
| Portable Pumps        | Diaphram  | Crystal         | All Waste - Benicia | 1 Hr.               | 2             | Air          | 4"           | Various    |       |           |          |
| Equipment Type        | Type      | Make/Model      | Location            | Dispatch Time       | # of Units    | Recovery     | Storage Cap  |            |       |           |          |
| Skimmers              | Weir      | Douglas         | All Waste - Benicia | 1 Hr.               | 2             | 60           | None         |            |       |           |          |
| Equipment Type        | Type      | Make/Model      | Location            | Length              | Dispatch Time | # of Units   | Info         |            |       |           |          |
| Sorbents              | Boom      | Ergon           | All Waste - Benicia | 100'                | 1 Hr.         | 1            | 8" x 10"     |            |       |           |          |
| Sorbents              | Pads      | Ergon           | All Waste - Benicia | N/A                 | 1 Hr.         | 100 Bales    | None         |            |       |           |          |
| Equipment Type        | Type      | Make/Model      | Location            | Dispatch Time       | # of Units    | Storage Cap  | Info         |            |       |           |          |
| Vacuum Trucks         | Truck     | Carbon Steel    | All Waste - Benicia | 2 Hr.               | 10            | 130          | None         |            |       |           |          |
| Vacuum Trucks         | Truck     | Stainless Steel | All Waste - Benicia | 1 Hr.               | 2             | 70           | None         |            |       |           |          |

**Allied Marine Services**

| Equipment Type        | Type        | Make/Model    | Location                   | Length        | Horsepowe  | Crew         | Draft        | Fuel   | Cargo   | Disp Time | # of Units |
|-----------------------|-------------|---------------|----------------------------|---------------|------------|--------------|--------------|--------|---------|-----------|------------|
| Boats                 | LCM-6       | Landing Craft | Allied Marine in Sausalito | 56'           | 450        | 2            | 3            | Diesel | 30 Tons | 1 Hr.     | 1          |
| Equipment Type        | Type        | Location      | Dispatch Time              | # of Units    | Info       | Power Source | Rated Amps   |        |         |           |            |
| Electrical Generators | Generator   | San Francisco | 2 Hr.                      | 1             | None       | Diesel       | 3            |        |         |           |            |
| Electrical Generators | Generator   | San Francisco | 2 Hr.                      | 1             | None       | Diesel       | 5            |        |         |           |            |
| Electrical Generators | Lights      | San Francisco | 2 Hr.                      | 21            | None       | Electric     | N/A          |        |         |           |            |
| Equipment Type        | Type        | Make/Model    | Location                   | Dispatch Time | # of Units | Power Source | Fitting Size | GPM    |         |           |            |
| Portable Pumps        | Centrifugal | Pacer         | Sausalito                  | 1 Hr.         | 1          | Hydraulic    | 2"           | 200    |         |           |            |
| Portable Pumps        | Centrifugal | Pacer         | Sausalito                  | 1 Hr.         | 1          | Hydraulic    | 3"           | 300    |         |           |            |

**ARCO Richmond Terminal**

| Equipment Type | Type    | Make/Model    | Location        | Sections        | # of Units | Storage“Cap.( | Info        |            |              |             |                |      |
|----------------|---------|---------------|-----------------|-----------------|------------|---------------|-------------|------------|--------------|-------------|----------------|------|
| Barges/Storage | Tank    | Fixed Storage | ARCO - Richmond |                 | 3          | 5000 EA       | None        |            |              |             |                |      |
| Equipment Type | Type    | Make/Model    | Location        | Sections        | Length     | Horsepower    | Crew        | Draft      | Fuel         | Cargo“cap/  | Disp Time      | # of |
| Boats          | Boat    | Aluminum      | ARCO - Richmond |                 | 20'        | 200           | 2           | 2          | Gas          | N/A         | 1 Hr.          | 1    |
| Equipment Type | Service | Type          | Make/Model      | Location        | Sections   | Length        | Length ded. | End“Conne  | Flotation“Di | Skirt “Leng | Transportation | Disp |
| Boom           | Inland  | Foam          | American        | ARCO - Richmond | 6"/100'    | 1700"         | 1700'       | c          | 9"           | 18"         | Barge          | N/A  |
| Boom           | Inland  | Foam          | Permanent       | ARCO - Richmond | N/A        | 350'          | 350'        | c          | N/A          | N/A         | Permanent      | N/A  |
| Equipment Type | Type    | Make/Model    | Location        | Sections        | Length     | Disp Time     | # of Units  | Info       |              |             |                |      |
| Sorbents       | Pads    | 3M            | ARCO - Richmond |                 | 18" X 18"  | 1 Hr.         | 100+        | 24" X 24"  |              |             |                |      |
| Sorbents       | Boom    | Abasco        | ARCO - Richmond |                 | 8          | 1 Hr.         | 40          | On trailer |              |             |                |      |

**B.O.R. Industries**

| Equipment Type | Organization      | Type     | Make/Model    | Location        | Dispatch Time | # of Units | Info |
|----------------|-------------------|----------|---------------|-----------------|---------------|------------|------|
| Sorbents       | B.O.R. Industries | Granules | Excel Mineral | West Sacramento | 2 Hr.         | 300 Bags   | None |

| Equipment Type | Organization      | Type | Make/Model | Location        | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
|----------------|-------------------|------|------------|-----------------|---------------|------------|--------------------|------|
| Vacuum Trucks  | B.O.R. Industries | Semi | Frell      | West Sacramento | 1 Hr.         | 2          | 130 ea             | None |

**Baker Tanks**

| Equipment Type | Type | Make/Model       | Location         | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
|----------------|------|------------------|------------------|---------------|------------|--------------------|------|
| Barges/Storage | Tank | Portable - Poly  | Yard - Pittsburg | 2 Hr.         | 12         | 15                 | None |
| Barges/Storage | Tank | Portable - Poly  | Yard - Pittsburg | 2-4 Hr.       | 4          | 95                 | None |
| Barges/Storage | Tank | Portable - Poly  | Yard - Pittsburg | 2-4 Hr.       | 30         | 155                | None |
| Barges/Storage | Tank | Portable - Steel | Pittsburg        | 4 Hr.         | 80         | 500                | None |

**Bay/Diablo Petroleum Company**

| Equipment Type | Type | Make/Model | Location      | Length | Dispatch Time | # of Units | Info |
|----------------|------|------------|---------------|--------|---------------|------------|------|
| Sorbents       | Boom | Pig        | Concord Plant | 10'    | 1 Hr.         | 25         | None |
| Sorbents       | Pad  | 3M         | Concord Plant | N/A    | 1 Hr.         | 6          | None |

**Betabel Island FPD**

| Equipment Type | Type | Make/Model | Location            | Length | Dispatch Time | # of Units | Info |
|----------------|------|------------|---------------------|--------|---------------|------------|------|
| Sorbents       | Pads | Absorbent  | Betabel Island Fire | 18'    | 2 Hr.         | 1000       | None |
| Sorbents       | Boom | Pig        | Betabel Island Fire | 400'   | 2 Hr.         | N/A        | None |

Cal-Bay Industrial Services

| Equipment Type | Type | Make/Model | Location        | Length | Horsepower | Crew | Draft | Fuel   | Cargo cap/wt | Dispatch Time | # of Units |
|----------------|------|------------|-----------------|--------|------------|------|-------|--------|--------------|---------------|------------|
| Boats          | Boat | Monarch    | Crockett Marina | 40'    | 750        | 2    | 4     | Diesel | N/A          | 1 Hr.         | 1          |
| Boats          | Boat | Monarch    | Crockett Marina | 50'    | 950        | 2    | 4     | Diesel | N/A          | 1 Hr.         | 1          |

Castrol, Inc.

| Equipment | Service | Type  | Make/Model | Location           | Length | Length | Connector | Flotation | Skirt | Trans | Dispatch Time |
|-----------|---------|-------|------------|--------------------|--------|--------|-----------|-----------|-------|-------|---------------|
| Boom      | Inland  | Fence | Oil Fence  | Castrol - Richmond | 400'   | 400'   | d         | 12"       | 12"   | N/A   | 1/2 Hr.       |

| Equipment | Type     | Make/Model | Location           | Sections | Length | Dispatch Time | # of Units | Info |
|-----------|----------|------------|--------------------|----------|--------|---------------|------------|------|
| Sorbents  | Boom     | 3M         | Castrol - Richmond |          | 5'     | 2 Hr.         | 100        | None |
| Sorbents  | Pads     | 3M         | Castrol - Richmond |          | N/A    | 2 Hr.         | 2 Bales    | None |
| Sorbents  | Hull Ash |            | Castrol - Richmond |          | N/A    | 2 Hr.         | 1000 lbs   | None |

Chevron USA Richmond Long Wharf

| Equipment | Type | Make/Model    | Location            | Length  | Horsepower | Crew | Draft   | Fuel | Cargo cap | Dispatch Time |
|-----------|------|---------------|---------------------|---------|------------|------|---------|------|-----------|---------------|
| Boats     | Boat | Munson        | Richmond Long Wharf | 26'     | 280        | 3    | 2       | Gas  | N/A       | 2 Hr.         |
| Boats     | Boat | Munson        | Richmond Long Wharf | 32'     | 200        | 3    | 2       | Gas  | N/A       | 2 Hr.         |
| Boats     | Boat | Monark #1     | Richmond Long Wharf | 23'     | 175        | 3    | 2       | Gas  | N/A       | 2 Hr.         |
| Boats     | Boat | Boston Whaler | Richmond Long Wharf | 17'     | 50         | 2    | 1       | Gas  | N/A       | 2 Hr.         |
| Boats     | Boat | Boston Whaler | Richmond Long Wharf | 14'     | 25         | 2    | 1       | Gas  | N/A       | 2 Hr.         |
| Boats     | Boat | Work Boats    | Richmond Long Wharf | Various | Various    | 2    | Various | Gas  | N/A       | 2 Hr.         |

| Equipment | Service | Type  | Make/Model       | Location       | Length | Length | Connector | Flotation | Skirt | Transportation         | Dispatch Time |
|-----------|---------|-------|------------------|----------------|--------|--------|-----------|-----------|-------|------------------------|---------------|
| Boom      | Inland  | Fence | Crowley Pet Bar  | Berth 5 - Rich | 3600'  | N/A    | b         | 1"        | 24"   | Flaked on Pier         | 2 Hr.         |
| Boom      | Inland  | Infl  | Kepner Reel Pak  | Berths 1 & 4   | 2250'  | 2250'  | b         | 11"       | 16"   | Permanent Installation | N/A           |
| Boom      | Inland  | Foam  | Kepner Foam Fill | Richmond Lo    | 2000'  | N/A    | b         | 6"        | 10"   | On Boom Trailer        | 2 Hr.         |
| Boom      | Inland  | Foam  | Kepner Foam Fill | A&B Berth -    | 1000'  | N/A    | b         | 8"        | 12"   | On Munsons             | 2 Hr.         |
| Boom      | Inland  | Foam  | American         | ARCO - Rich    | 1700'  | 1700'  | c         | 9"        | 18"   | Barge                  | N/A           |
| Boom      | Inland  | Foam  | Permanent        | ARCO - Rich    | 350'   | 350'   | c         | N/A       | N/A   | Permanent Installation | N/A           |

| Equipment | Type   | Make/Model | Location                  | Length       | Dispatch Ti | # of Units | Info          |
|-----------|--------|------------|---------------------------|--------------|-------------|------------|---------------|
| Sorbents  | Boom   | 3M         | Spill Equipment Container | N/A          | 2 Hr.       | 36 Bales   | 4 Booms/Bale  |
| Sorbents  | Sweeps | 3M         | Spill Equipment Container | 100' Section | 2 Hr.       | 40         | None          |
| Sorbents  | Sheets | 3M         | Spill Equipment Container | N/A          | 2 Hr.       | 60         | 20 Sheets/Bal |

**Chevron USA, Eureka Terminal**

| Equipment | Type         | Make/Model    | Length                  | Horsepower | Crew          | Draft      | Fuel         | Cargo cap/wt | Dispatch Time | # of Units |
|-----------|--------------|---------------|-------------------------|------------|---------------|------------|--------------|--------------|---------------|------------|
| Boats     | Skiff        | Boston Whaler | 21'                     | 280        | 2             | 2'         | gas          | n/a          | 1/2 Hr.       | 1          |
| Equipment | Type         | Make/Model    | Dispatch Time           | # of Units | Info          | Frequency  |              |              |               |            |
| Comms     | Radio        | VHF Portable  | 5 Min.                  | 4          | None          | Several    |              |              |               |            |
| Comms     | Base Station | VHF Portable  | 5 Min.                  | 1          |               | Several    |              |              |               |            |
| Equipment | Type         | Make/Model    | Location                | Length     | Dispatch Time | # of Units | Info         | Frequency    |               |            |
| Sorbents  | Boom         | 3M Type 270   | Chevron-Eureka Terminal | N/A        | 1/2 Hr.       | 6          | None         | N/A          |               |            |
| Sorbents  | Sheets       | 3M Type 156   | Chevron-Eureka Terminal |            | 1/2 Hr.       | 5 Bales    | 100 Per Bale | N/A          |               |            |
| Sorbents  | Blankets     | 3M            | Chevron-Eureka Terminal | 200'       | 1/2 Hr.       | 1          | None         |              |               |            |
| Sorbents  | Pads         | 3M            | Chevron-Eureka Terminal | N/A        | 1/2 Hr.       | 5 Boxes    | 110 Per Box  | N/A          |               |            |

## F - 15 - SFB

F - 15 - SFBF - 15 - SFBF - 15 - SFB

|                 |         |       |                    |                        |            |        |           |           |       |            |
|-----------------|---------|-------|--------------------|------------------------|------------|--------|-----------|-----------|-------|------------|
| Boom Vessel     | Ocean   | Fence | Troil Boom 1100    | C.B. WRSE - Concord    | 50'        | 50'    | N/A       | j         | 16"   | 42"        |
| Boom Palletized | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
|                 | Ocean   | Infl  | Net Boom           | C.B. WRSE - Concord    | Continuous | 80'    | N/A       | N/A       | 11"   | 36"        |
|                 | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Equipment Type  | Service | Type  | Make/Model         | Location               | Length     | Length | Connector | Flotation | Skirt | Trans      |
| Disp Time       |         |       |                    |                        |            |        |           |           |       |            |
| Boom            | Ocean   | Weir  | Texaboom           | C.B. WRSE - Concord    | 40'        | N/A    | N/A       | 5"        | 25"   | Palletized |
| 2 Hr.           |         |       |                    |                        |            |        |           |           |       |            |
| Boom            | Ocean   | Infl  | Vikoma Sea Pak     | DMS - MTZ on Barge     | 1600'      | N/A    | N/A       | 27"       | 17"   | Barge on   |
| Truck           | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Kepner Sea Curtain | I.T. Vinehill - MTZ    | 1000'      | N/A    | d         | 16"       | 12"   | Kepner     |
| Trailer 1       | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Kepner Sea Curtain | I.T. Vinehill - MTZ    | 1000'      | N/A    | d         | 16"       | 12"   | Kepner     |
| Trailer 2       | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Kepner Sea Curtain | I.T. Vinehill - MTZ    | 1000'      | N/A    | d         | 16"       | 12"   | Kepner     |
| Trailer 3       | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Kepner Sea Curtain | I.T. Vinehill - MTZ    | 1400'      | N/A    | d         | 16"       | 12"   | Kepner     |
| Trailer 4       | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Abasco             | O.Niem Tower - Oakland | 2400'      | N/A    | a         | 9"        | 11"   | Container  |
| 8               | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | Abasco             | C.B. WRSE - Concord    | 400'       | N/A    | a         | 9"        | 11"   | Palletized |
| 2 Hr.           |         |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Munson I - DMS - MTZ   | 300'       | N/A    | a         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Munson II - DMS - MTZ  | 300'       | N/A    | a         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Raider I - DMS-MTZ     | 600'       | N/A    | a         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Raider II - DMS - MTZ  | 650'       | N/A    | a         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Raider III - DMS - MTZ | 600'       | N/A    | a         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Raider IV - DMS - MTZ  | 650'       | N/A    | b         | 9"        | 11"   | On boat w/ |
| trailer         | 2 Hr.   |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American Marine    | Trailer #1 - DMS - MTZ | 1900'      | N/A    | b         | 9"        | 11"   | Trailer    |
| 2 Hr.           |         |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American D&B       | Trailer #2 - DMS - MTZ | 2000'      | N/A    | b         | 9"        | 11"   | Trailer    |
| 2 Hr.           |         |       |                    |                        |            |        |           |           |       |            |
| Boom            | Inland  | Foam  | American D&B       | Trailer #4 - DMS - MTZ | 1600'      | N/A    | b         | 6"        | 11"   | Trailer    |



F - 17 - SEB

|                         |        |            |                             |                           |            |          |             |     |     |            |
|-------------------------|--------|------------|-----------------------------|---------------------------|------------|----------|-------------|-----|-----|------------|
| 2 Hr.<br>Boom           | Inland | Foam       | American D&B                | DMS - MTZ                 | 5400'      | N/A      | b           | 9"  | 11" | Palletized |
| 2 Hr.<br>Boom           | River  | Foam       | River Containment           | DMS - MTZ                 | 1200'      | N/A      | b           | 6"  | 11" | Container  |
| 2 Hr.<br>Boom           | River  | Foam       | MK - II - B                 | C.B. WRSE - Concord       | 5000'      | N/A      | b           | 9"  | 11" | Units      |
| 2 Hr.<br>Boom           | River  | Foam       | American D&B                | C.B. WRSE - Concord       | 2000'      | N/A      | b           | 6"  | 11" | Palletized |
| 2 Hr.<br>Boom           | River  | Foam       | American D&B                | C.B. WRSE - Concord       | 400'       | N/A      | b           | 6"  | 9"  | Palletized |
| 2 Hr.<br>Boom           | River  | Foam       | American Marine             | C.B. WRSE - Concord       | 100'       | N/A      | b           | 6"  | 11" | Palletized |
| 2 Hr.<br>Boom           | River  | Foam       | American Marine             | C.B. WRSE - Concord       | 100'       | N/A      | b           | 6"  | 11" | Palletized |
| 2 Hr.<br>Boom           | River  | Foam       | American D&B                | Arco Terminal - Richmond  | 1000'      | N/A      | b           | 5"  | 11" | Storage    |
| 2 Hr.<br>Contain. #3    | River  | Foam       | American D&B                | Cordelia Fire Department  | 500'       | N/A      | b           | 5"  | 11" | Storage    |
| 2 Hr.<br>Container      | River  | Foam       | American D&B                | Vallejo Marina            | 500'       | N/A      | b           | 5"  | 11" | Storage    |
| 2 Hr.<br>Container      | River  | Foam       | American D&B                | Sausalito                 | 957'       | N/A      | b           | 9"  | 11" | Container  |
| 2 Hr.<br>Boom #5        | River  | Foam       | American D&B                | Alameda - Barges          | 1345'      | N/A      | b           | 9"  | 11" | Container  |
| 2 Hr.<br>Boom #7        | Swamp  | Foam       | American Marine             | C.B. WRSE - Concord       | 2000'      | N/A      | d           | 4"  | 4"  | Palletized |
| 2 Hr.<br>Boom           | Swamp  | Foam       | American Marine             | C.B. WRSE - Concord       | 2000'      | N/A      | d           | 3"  | 3"  | Palletized |
| 2 Hr.<br>Boom #1        | Swamp  | Foam       | American Marine             | Cordelia Fire Department  | 500'       | N/A      | d           | 3"  | 3"  | Container  |
| 2 Hr.<br>Boom #2        | Swamp  | Foam       | American Marine             | Vallejo Marina            | 500'       | N/A      | d           | 3"  | 3"  | Container  |
| 2 Hr.<br>Boom X 90" Box | Harbor | Fence      | Aquafence                   | C.B. WRSE - Concord       | 500'       | N/A      | N/A         | 12" | 12" | 30" X 46"  |
| 2 Hr.<br>Boom           |        | Belt       | Marco III                   | Spill Spoiler I - Oakland |            |          |             |     |     |            |
| Equipment Type          | Type   | Make/Model | Location                    | Disp Time                 | # of Units | Recovery | Storage Cap |     |     |            |
| Boom                    | Belt   | Marco III  | Spill Spoiler II - Martinez | 2 Hr.                     | 1          | 4000     | 90          |     |     |            |
| Boom                    | Belt   | Marco I    | Mini Spoiler I - Martinez   | 2 Hr.                     | 1          | 445      | 2           |     |     |            |

|      |         |               |                              |       |   |      |       |
|------|---------|---------------|------------------------------|-------|---|------|-------|
| Boom | Belt    | Marco I       | Mini Spoiler II - Martinez   | 2 Hr. | 1 | 445  | 2     |
| Boom | Weir    | GT-185        | Clean Bay I - Richmond       | 2 Hr. | 1 | 1368 | 1265  |
| Boom | Weir    | Walosep W-1/2 | Clean Bay I - Richmond       | 2 Hr. | 1 | 1920 | 1265  |
| Boom | Weir    | GR-185        | Clean Bay II - San Francisco | 2 Hr. | 1 | 1368 | 2090  |
| Boom | Weir    | Walosep W-2   | Clean Bay II - San Francisco | 2 Hr. | 1 | 1920 | 2090  |
| Boom | Weir    | Walosep W-4   | Barge 1 - Oakland            | 2 Hr. | 1 | 3562 | 10000 |
| Boom | Weir    | Walosep W-4   | C.B. WRSE - Concord          | 2 Hr. | 1 | 3562 | N/A   |
| Boom | Weir    | Walosep WM    | C.B. WRSE - Concord          | 2 Hr. | 2 | 298  | N/A   |
| Boom | Weir    | Walosep WI    | C.B. WRSE - Concord          | 2 Hr. | 1 | 1440 | N/A   |
| Boom | Weir    | GT-260        | C.B. WRSE - Concord          | 2 Hr. | 1 | 3000 | N/A   |
| Boom | Weir    | Destroil      | C.B. WRSE - Concord          | 2 Hr. | 2 | 7430 | N/A   |
| Boom | Oil Mop | 6 Inch        | C.B. WRSE - Concord          | 2 Hr. | 1 | 48   | 57    |
| Boom | Oil Mop | 4 Inch        | C.B. WRSE - Concord          | 2 Hr. | 8 | 34   | N/A   |
| Boom | Vacuum  | Oil Kawg      | C.B. WRSE - Concord          | 2 Hr. | 2 | 120  | N/A   |
| Boom | Vacuum  | Skim Pak      | C.B. WRSE - Concord          | 2 Hr. | 2 | 120  | N/A   |

| Equipment Type | Type        | Make/Model | Location       | Disp Time | # of Units | Pwr Src   | Fitting Size | GPM  |
|----------------|-------------|------------|----------------|-----------|------------|-----------|--------------|------|
| Transfer Pumps | Submersible | TK-150     | Clean Bay I    | 2 Hr.     | 1          | Hydraulic | 6"           | 1200 |
| Transfer Pumps | Submersible | TK-150     | Clean Bay II   | 2 Hr.     | 1          | Hydraulic | 6"           | 1200 |
| Transfer Pumps | Submersible | Desmi-250  | DMS - Martinez | 2 Hr.     | 2          | Hydraulic | 6"           | 1200 |

| Equipment Type | Type         | Make/Model | Location            | Disp Time | # of Units | Info      | Frequency |
|----------------|--------------|------------|---------------------|-----------|------------|-----------|-----------|
| Comms          | Radio        | Handset    | Clean Bay - Concord | 15 Min.   | 35         | 2 way UHF | Several   |
| Comms          | Cell Phones  | Handheld   | Clean Bay - Concord | 15 Min.   | 7          | None      | Several   |
| Comms          | Base Station | Mobile     | Clean Bay - Concord | 2 Hr.     | 1          | None      | Several   |
| Comms          | Base Station | Fixed      | Clean Bay - Concord | 2 Hr.     | 1          | None      | Several   |
| Comms          | Repeater     | Mobile     | Clean Bay - Concord | 2 Hr.     | 1          | None      | Several   |
| Comms          | Repeater     | Fixed      | Clean Bay - Concord | 2 Hr.     | 1          | None      | Several   |

| Equipment Type | Type  | Make/Model | Location                    | Disp Time | # of Units | Info            |
|----------------|-------|------------|-----------------------------|-----------|------------|-----------------|
| Dispersants    | Exxon | Corexit    | I.T. Corporation - Martinez | 2 Hr.     | 4400 Gal   | In tank trailer |
| Dispersants    | Exxon | Corexit    | Chevron Richmond Refinery   | 2 Hr.     | 10340 Gal  | In warehouse 8  |

| Equipment Type     | Type      | Make/Model | Location            | Disp Time | # of Units | Info       | Pwr Src     | Rated Amps |
|--------------------|-----------|------------|---------------------|-----------|------------|------------|-------------|------------|
| Elctrcl Generators | Generator | GE         | Clean Bay - Concord | 2 Hr.     | 1          | None       | Diesel      | 12.5       |
| Elctrcl Generators | Lights    | Quartz     | Clean Bay - Concord | 2 Hr.     | 4          | Telescopic | Electricity | None       |

| Equipment Type | Type    | Make/Model  | Location            | Disp Time | # of Units | Info |
|----------------|---------|-------------|---------------------|-----------|------------|------|
| Mbl Cmnd Post  | Trailer | Custom Made | Clean Bay - Concord | 2 Hr.     | 1          | None |

| Equipment Type | Type        | Make/Model | Location            | Disp Time | # of Units | Pwr Src | Fitting Size | GPM     |
|----------------|-------------|------------|---------------------|-----------|------------|---------|--------------|---------|
| Portable Pumps | Diaphram    | Wilden     | C.B. WRSE - Concord | 2 Hr.     | 2          | Air     | 2"           | 104     |
| Portable Pumps | Centrifugal | Homelite   | C.B. WRSE - Concord | 2 Hr.     | 9          | Gas     | 2"           | 140     |
| Portable Pumps | Diaphram    | Wilden     | C.B. WRSE - Concord | 2 Hr.     | 2          | Air     | 2"           | 35      |
| Portable Pumps | Centrifugal | Homelite   | C.B. WRSE - Concord | 2 Hr.     | 6          | Gas     | 2"           | 80      |
| Portable Pumps | Screw       | Trash      | C.B. WRSE - Concord | 2 Hr.     | 3          | Gas     | 2"/3"/6"     | Various |

| Equipment Type | Type | Make/Model | Location                    | Length | Disp Time | # of Units | Info            |
|----------------|------|------------|-----------------------------|--------|-----------|------------|-----------------|
| Sorbents       | Boom | Abasco     | I.T. Corporation - Martinez | 2300   | 2 Hr.     | 1          | On semi trailer |

## F - 20 - SFB

F - 20 - SFB

## F - 20 - SFB

## F - 20 - SFB

| Equipment Type        | Type      | Make/Model     | Location             | Dispatch Time | # of Units  | Info               | Power“Sou       | GPM  |
|-----------------------|-----------|----------------|----------------------|---------------|-------------|--------------------|-----------------|------|
| Electrical Generators | Generator | Kubota         | Re-Refinery - Newark | 2 Hr.         | 1           | None               | Diesel          | 500  |
| Equipment Type        | Type      | Make/Model     | Location             | Dispatch Time | # of Units  | Info               |                 |      |
| Mobile Command Post   | Van       | Self-Contained | Re-Refinery - Newark | 2 Hr.         | 1           | None               |                 |      |
| Equipment Type        | Type      | Make/Model     | Location             | Dispatch Time | # of Units  | Recovery (b        | Storage Ca      | Info |
| Skimmers              | Weir      | Megator M-1    | Re-Refinery - Newark | 3 Hr.         | 1           | 100                | None            | None |
| Equipment Type        | Type      | Make/Model     | Location             | Length        | Dispatch“Ti | # of Units         | Amplifying Info |      |
| Sorbents              | Boom      | SPC            | Re-Refinery - Newark | 10'           | 2 Hr.       | 80                 | None            |      |
| Sorbents              | Roll      | SPC            | Re-Refinery - Newark | 100'          | 2 Hr.       | 6                  | None            |      |
| Sorbents              | Pads      | Greasuch       | Re-Refinery - Newark | N/A           | 2 Hr.       | 400 Bags           | None            |      |
| Equipment Type        | Type      | Make/Model     | Location             | Dispatch Time | # of Units  | Storage Cap.(bbls) |                 |      |
| Vacuum Trucks         | Truck     | Various        | Re-Refinery - Newark | 2 Hr.         | 5           | 50-120             |                 |      |

Erickson, Inc.

| Equipment Type | Type         | Make/Model   | Location           | Dispatch Time | # of Units    | Storage Cap.(bbls) | Info         |     |
|----------------|--------------|--------------|--------------------|---------------|---------------|--------------------|--------------|-----|
| Barges/Storage | Tank         | Portable     | Richmond           | 4 Hr.         | 60            | 500                | None         |     |
| Barges/Storage | Tank         | Portable     | Richmond           | 4 Hr.         | 4             | 4000               | None         |     |
| Barges/Storage | Tank         | Portable     | Richmond           | 4 Hr.         | 4             | 6000               | None         |     |
| Barges/Storage | Tank         | Portable     | Richmond           | 4 Hr.         | 4             | 8000               | None         |     |
| Equipment Type | Type         | Make/Model   | Location           | Dispatch Time | # of Units    | Power Source       | Fitting Size | GPM |
| Portable Pumps | Submersible  | Sludge       | Richmond Warehouse | 2 Hr.         | 1             | Hydraulic          | 4"           | 125 |
| Portable Pumps | Submersible  | Sludge       | Richmond Warehouse | 2 Hr.         | 1             | Hydraulic          | 6"           | 175 |
| Portable Pumps | Centrifugal  | Wilden       | Richmond Warehouse | 2 Hr.         | 2             | Hydraulic          | 3"           | 200 |
| Portable Pumps | Centrifugal  | Wilden       | Richmond Warehouse | 2 Hr.         | 2             | Hydraulic          | 4"           | 200 |
| Equipment Type | Type         | Make/Model   | Location           | Length        | Dispatch Time | # of Units         | Info         |     |
| Sorbents       | Bags         | Solid-a-sorb | Richmond Warehouse | N/A           | 2 Hr.         | 2500               | None         |     |
| Sorbents       | Pads         | 3M           | Richmond Warehouse | N/A           | 2 Hr.         | 40 Bundles         | None         |     |
| Sorbents       | Boom         | 3M           | Richmond Warehouse | 200'          | 2 Hr.         | N/A                | None         |     |
| Equipment Type | Type         | Make/Model   | Location           | Dispatch Time | # of Units    | Storage Cap.(bbls) | Info         |     |
| Vacuum Trucks  | Semi Trailer | Thompson     | Richmond           | 2 Hr.         | 12            | 130 Each           | None         |     |
| Vacuum Trucks  | Truck        | Clark        | Richmond           | 2 Hr.         | 10            | 38 Each            | None         |     |

Gibson Environmental

| Equipment Type | Type    | Make/Model  | Location     | Dispatch Time          | # of Units  | Storage“   | Amplifying Info |              |                 |         |            |               |
|----------------|---------|-------------|--------------|------------------------|-------------|------------|-----------------|--------------|-----------------|---------|------------|---------------|
| Barges/Storage | Tank    | Tank Farm   | Redwood City | N/A                    | 1           | 25000      | None            |              |                 |         |            |               |
| Equipment Type | Type    | Make/Model  | Location     | Length                 | Horse pow   | Crew       | Draft           | Fuel         | Cargo“          | Dispat  | # of Units |               |
| Boats          | Vessel  | Slick Bar   | Redwood City | 26'                    | 100         | 3          | 3               | Gas          | 500 lbs.        | 1/2 Hr. | 1          |               |
| Equipment Type | Service | Type        | Make/Model   | Location               | Sections    | Length     | Length          | Connector    | Flotatio        | Skirt “ | Trans      | Dispatch Time |
| Boom           | Ocean   | Foam        | Sea Curtain  | On Boat - Redwood City | 10' / 100'  | 1500'      | 1500'           | a            | 8"              | 10"     | Always     | 2 Hr.         |
| Equipment Type | Service | Type        | Make/Model   | Location               | Dispatch Ti | # of Units | Power Source    | Fitting Size | GPM             |         |            |               |
| Portable Pumps |         | Centrifugal | Veramatic    | Redwood City Warehouse | 1 Hr.       | 1          | Air             | 3"           | 150             |         |            |               |
| Portable Pumps |         | Centrifugal | Veramatic    | Redwood City Warehouse | 1 Hr.       | 1          | Air             | 2"           | 150             |         |            |               |
| Equipment Type | Service | Type        | Make/Model   | Location               | Length      | Dispatch   | # of Units      | Storage“Ca   | Amplifying Info |         |            |               |
| Sorbents       |         | Pads        | Sorbent      | Redwood City           | None        | 1 Hr.      | 12 Bales        | None         |                 |         |            |               |
| Sorbents       |         | Boom        | Mini-Boom    | Redwood City           | 6" X 10"    | 1 Hr.      | 10              | None         |                 |         |            |               |

Delta Oil Field Services

| Equipment Type | Type  | Make/Model      | Location               | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
|----------------|-------|-----------------|------------------------|---------------|------------|--------------------|------|
| Barges/Storage | Tank  | Open Top        | Woodland - Shore/Barge | 1 Hr.         | 3          | 50                 | None |
| Barges/Storage | Tank  | Closed Top      | Woodland - Shore/Barge | 1 Hr.         | 4          | 500                | None |
| Barges/Storage | Tank  | Poly Tanks      | Woodland - Shore/Barge | 1 Hr.         | 4          | 330                | None |
| Barges/Storage | Tank  | Mobile Trailers | Woodland - Shore/Barge | 1 Hr.         | 10         | 100                | None |
| Equipment Type | Type  | Make/Model      | Location               | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
| Vacuum Trucks  | Truck | Various         | Woodland               | 1 Hr.         | 7          | 120                | None |

Defense Fuel Support Point

| Equipment Type        | Organization               | Service      | Type            | Make/Model          | Location       | Sections   | Length    | Length       | Conn     | Flotation |
|-----------------------|----------------------------|--------------|-----------------|---------------------|----------------|------------|-----------|--------------|----------|-----------|
| Skirt                 |                            |              |                 |                     |                |            |           |              |          |           |
| Boom                  | Defense Fuel Support Point | Inland       | Foam            | Crowley Sea Curtain | Ozol Fuel Pier | 20'/100'   | 2000'     | 2000'        | d        | 8" 12"    |
| Equipment Type        | Organization               | Type         | Make/Model      | Location            | Dispatch Time  | # of Units | Info      | Frequency    |          |           |
| Comms                 | Defense Fuel Support Point | Portable     | Motorola MT 500 | Office              | 15 Min.        | 5          | None      | Several      |          |           |
| Comms                 | Defense Fuel Support Point | Base Station | None            | Office              | 15 Min.        | 1          | None      | Several      |          |           |
| Equipment Type        | Organization               | Type         | Make/Model      | Location            | Dispatch Time  | # of Units | Info      | Power Source | Amps     |           |
| Electrical Generators | Defense Fuel Support Point | Generator    | GE              | At Fuel Pier - Ozol | 15 Min.        | 1          | None      | Diesel       | 1250 KVA |           |
| Equipment Type        | Organization               | Type         | Make/Model      | Location            | Dispatch Time  | # of Units | Power So  | Rated Amps   |          |           |
| Portable Pumps        | Defense Fuel Support Point | Centrifugal  | Gorman/RUP      | Diesel Building     | 2 Hr.          | 1          | Hydraulic | 120          |          |           |
| Equipment Type        | Organization               | Type         | Make/Model      | Location            | Dispatch Time  | # of Units | Info      |              |          |           |
| Sorbents              | Defense Fuel Support Point | Pads         | 3M              | Warehouse & Pier    | 1 Hr.          | 15 Bales   | None      |              |          |           |
| Sorbents              | Defense Fuel Support Point | Sweep        | 3M              | Warehouse & Pier    | 1 Hr.          | N/A        | None      |              |          |           |
| Sorbents              | Defense Fuel Support Point | Boom         | 3M              | Warehouse & Pier    | 1 Hr.          | 4 x 50'    | None      |              |          |           |

Crescent City Harbor District

| Equipment Type | Type   | Make/Model | Location                   | Length        | Dispatch Time | # of Units         | Info            |
|----------------|--------|------------|----------------------------|---------------|---------------|--------------------|-----------------|
| Sorbents       | Pads   | Sorbex     | Harbor District Shop       | 24' x 200'    | 1/2 Hr.       | 5                  | None            |
| Sorbents       | Sweeps | M-80       | Harbor District-Shop       | N/A           | 1/2 Hr.       | 1                  | None            |
| Sorbents       | Boom   | M-55       | Harbor District-Shop       | 10'           | 1/2 Hr.       | 4                  | None            |
| Sorbents       | Boom   | Sorbent    | Harbor District-Shop       | 50'           | 1/2 Hr.       | 1                  | None            |
| Equipment Type | Type   | Make/Model | Location                   | Dispatch Time | # of Units    | Storage Cap.(bbls) | Info            |
| Vacuum Trucks  | OWS    | Unknown    | Harbor District-Fourth Bay | N/A           | 1             | 190                | 20 GPM Recovery |

Concord Crane & Rentals

| Equipment Type | Type  | Make/Model | Location       | Dispatch Time | # of Units | Storage Cap.(bbls) | Info          |
|----------------|-------|------------|----------------|---------------|------------|--------------------|---------------|
| Vacuum Trucks  | Truck | Various    | Yard - Concord | 2 Hr.         | 3          | 120                | If not on job |

San Francisco Marine

| Equipment Type | Service | Type       | Make/Model    | Location      | Sections | Length        | Length     | Flotation | Skirt | Transportation | Dispatch Time |
|----------------|---------|------------|---------------|---------------|----------|---------------|------------|-----------|-------|----------------|---------------|
| Boom           | Inland  | Curtain    | Unknown       | San Francisco | 6'/50/   | 150'          | 150'       | 6'''      | 8"    | N/A            | N/A           |
| Equipment Type | Type    | Make/Model | Location      | Sections      | Length   | Dispatch Time | # of Units | Info      |       |                |               |
| Sorbents       | Boom    | 3M         | San Francisco |               | 60'      | 1/2 Hr.       | 2          | None      |       |                |               |
| Sorbents       | Pads    | 3M         | San Francisco |               | N/A      | 1/2 Hr.       | 2 Bales    | None      |       |                |               |

**Rust Corporation**

| Equipment Type        | Type      | Make/Model | Location | Dispatch Time | # of Units | Info | Power Source | Rated Amps |
|-----------------------|-----------|------------|----------|---------------|------------|------|--------------|------------|
| Electrical Generators | Generator | GE         | Benecia  | 1 Hr.         | 1          | None | Diesel       | 3.5        |
| Electrical Generators | Generator | GE         | Benecia  | 1 Hr.         | 1          | None | Diesel       | 5          |
| Electrical Generators | Lights    | Quartz     | Benecia  | 1 Hr.         | 10         | None | Electricity  | N/A        |

| Equipment Type | Type        | Make/Model | Location | Dispatch Time | # of Units | Power Source | Fitting Size | GPM     |
|----------------|-------------|------------|----------|---------------|------------|--------------|--------------|---------|
| Portable Pumps | Centrifugal | Godwin     | Benecia  | 1 Hr.         | 3          | Hydraulic    | 8"           | 2000    |
| Portable Pumps | Diaphram    | Wilden     | Benecia  | 1 Hr.         | 6          | Air          | 3"           | Various |
| Portable Pumps | Submersible | Thompson   | Benecia  | 1 Hr.         | 2          | Hydraulic    | 4"           | 1500    |

| Equipment Type | Type        | Make/Model      | Location | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
|----------------|-------------|-----------------|----------|---------------|------------|--------------------|------|
| Vacuum Trucks  | Various     | Carbon Steel    | Benecia  | 2-4 Hrs.      | 7          | 60                 | None |
| Vacuum Trucks  | Various     | Stainless Steel | Benecia  | 2-4 Hrs.      | 2          | 60                 | None |
| Vacuum Trucks  | Wet/Dry Vac | Guzzler         | Benecia  | 2-4 Hrs.      | 3          | 30 cubic yds       | None |
| Vacuum Trucks  | Sewage Vac  | Money Truck     | Benecia  | 2-4 Hrs.      | 1          | 30 cubic yds       | None |

**Romberg Center**

| Equipment Type | Type | Make/Model    | Location                     | Length | Horsepower | Crew | Draft | Fuel   | Cargo cap/wt | Dispatch Time | # of Units |
|----------------|------|---------------|------------------------------|--------|------------|------|-------|--------|--------------|---------------|------------|
| Boats          | Boat | Boston Whaler | Tiuron - Paradise Cay Marina | 38'    | 450        | 5    | 3     | Diesel | N/A          | 2 Hr.         | 1          |



Riedel Environment Service

| Equipment Type | Service | Type | Make/Model  | Location | Sections | Length | Length | Conn | Flotation | Skirt | Transportation       | Dispatch |
|----------------|---------|------|-------------|----------|----------|--------|--------|------|-----------|-------|----------------------|----------|
| Boom           | River   | Foam | Containment | Richmond | 100'     | 3000'  | N/A    | b    | 6"        | 18"   | Boom Trailer         | 1 Hr.    |
| Boom           | River   | Foam | Containment | Richmond | 100'     | 2000'  | N/A    | b    | 6"        | 18"   | In yard - SF Channel | 1 Hr.    |
| Boom           | River   | Foam | Containment | Richmond | 100'     | 1200'  | N/A    | b    | 6"        | 18"   | On Vessel            | 1 Hr.    |

| Equipment Type       | Type        | Make/Model | Location | Dispatch Time | # of Units | Power Src   | Fitting Size | GPM     |
|----------------------|-------------|------------|----------|---------------|------------|-------------|--------------|---------|
| Cargo Transfer Pumps | Submersible | Homelite   | Richmond | 1 Hr.         | 2          | Electricity | 1 1/2"       | 170     |
| Cargo Transfer Pumps | Centrifugal | Wilden     | Richmond | 1 Hr.         | 7          | Gas         | 3"           | 300     |
| Cargo Transfer Pumps | Diaphram    | Sandpiper  | Richmond | 1 Hr.         | 4          | Air         | 2"           | Various |
| Cargo Transfer Pumps | Diaphram    | Sandpiper  | Richmond | 1 Hr.         | 3          | Air         | 3"           | Various |
| Cargo Transfer Pumps | Diaphram    | Patay      | Richmond | 1 Hr.         | 1          | Manual      | 3"           | 70      |

| Equipment Type | Type        | Make/Model | Location | Dispatch Time | # of Units | Power Src   | Fitting Size | GPM |
|----------------|-------------|------------|----------|---------------|------------|-------------|--------------|-----|
| Portable Pumps | Submersible | Homelite   | Richmond | 1 Hr.         | 2          | Electricity | 4"           | 170 |
| Portable Pumps | Centrifugal | Wilden     | Richmond | 1 Hr.         | 2          | Hydraulic   | 3" & 4"      | 100 |
| Portable Pumps | Centrifugal | Wilden     | Richmond | 1 Hr.         | 11         | Hydraulic   | 2"           | 140 |

| Equipment Type | Type   | Make/Model | Location | Dispatch Time | # of Units | Recovery | Storage Cap |
|----------------|--------|------------|----------|---------------|------------|----------|-------------|
| Skimmers       | Vacuum | Acme/Slurp | Richmond | 1 Hr.         | 5          | 100      | N/A         |
| Skimmers       | Weir   | Acme/Mini  | Richmond | 1 Hr.         | 5          | 200      | N/A         |
| Skimmers       | Vacuum | Vac-U-Max  | Richmond | 1 Hr.         | 5          | 150      | N/A         |

| Equipment Type | Type     | Make/Model | Location | Length | Dispatch Ti | # of Units | Info         |
|----------------|----------|------------|----------|--------|-------------|------------|--------------|
| Sorbents       | Pads     | 3M         | Richmond | N/A    | 1 Hr.       | 60 Bales   | None         |
| Sorbents       | Pillows  | 3M         | Richmond | N/A    | 1 Hr.       |            | None         |
| Sorbents       | Sweep    | 3M         | Richmond | N/A    | 1 Hr.       | 10 Bags    | None         |
| Sorbents       | Booms    | 3M         | Richmond | 3000   | 1 Hr.       | 50 Bales   | 40 Per Bales |
| Sorbents       | Blankets | 3M         | Richmond | N/A    | 1 Hr.       | 4          | None         |
| Sorbents       | Pom Poms | 3M         | Richmond | N/A    | 1 Hr.       | 15 Bales   | None         |

PRC-Patterson, Inc. DBA

| Equipment Type       | Type        | Make/Model | Location  | Dispatch Time | # of Units | Power Source | Fitting Size | GPM  |
|----------------------|-------------|------------|-----------|---------------|------------|--------------|--------------|------|
| Cargo Transfer Pumps | Centrifugal | Wilden     | Patterson | 1 Hr.         | 25         | Gas          | 6"           | 3500 |
| Cargo Transfer Pumps | Centrifugal | Wilden     | Patterson | 1 Hr.         | 1          | Hydraulic    | 6"           | 2500 |
| Cargo Transfer Pumps | Centrifugal | Wilden     | Patterson | 1 Hr.         | 1          | Gas          | 6"           | 4000 |
| Cargo Transfer Pumps | Centrifugal | Wilden     | Patterson | 1 Hr.         | 5          | Gas          | 6"           | 7000 |

| Equipment Type | Type  | Make/Model | Location  | Dispatch Time | # of Units | Info     | Frequency  |
|----------------|-------|------------|-----------|---------------|------------|----------|------------|
| Comms          | Radio | Motorola   | Patterson | 1 Hr.         | 20         | Portable | 50 Channel |

| Equipment Type | Type     | Make/Model | Location  | Dispatch Time | # of Units | Power Source | Fitting Size | GPM |
|----------------|----------|------------|-----------|---------------|------------|--------------|--------------|-----|
| Portable Pumps | Diaphram | Sand Piper | Patterson | 1 Hr.         | 1          | Air          | 3"           | 200 |
| Portable Pumps | Diaphram | Sand Piper | Patterson | 1 Hr.         | 2          | Air          | 3"           | 200 |

| Equipment Type | Type | Make/Model | Location  | Length | Dispatch Time | # of Units | Info |
|----------------|------|------------|-----------|--------|---------------|------------|------|
| Sorbents       | Boom | Pig        | Patterson | 10'    | 1 Hr.         | 15         | None |
| Sorbents       | Pads | Pig        | Patterson | N/A    | 1 Hr.         | 4 Bales    | None |

| Equipment Type | Type      | Make/Model | Location  | Dispatch Time | # of Units | Storage Cap.(bbls) | Info |
|----------------|-----------|------------|-----------|---------------|------------|--------------------|------|
| Vacuum Trucks  | Vac Units | Thompson   | Patterson | 1-2 Hrs.      | 1          | 120                | None |
| Vacuum Trucks  | Vac Units | Thompson   | Patterson | 1-2 Hrs.      | 1          | 50                 | None |
| Vacuum Trucks  | Vac Units | Thompson   | Patterson | 1-2 Hrs.      | 1          | 90                 | None |

Port of Stockton

| Equipment Type | Type | Make/Model  | Location         | Length | Horsepower | Crew | Draft | Fuel   | Cargo | Dispatch Time | # of Units |
|----------------|------|-------------|------------------|--------|------------|------|-------|--------|-------|---------------|------------|
| Boats          | Boat | Fire/Police | Port of Stockton | 46'    | 740        | 6    | 4     | Diesel | N/A   | 2 Hr.         | 1          |
| Boats          | Boat | Bridge      | Port of Stockton | 26'    | 180        | 4    | 3     | Diesel | N/A   | 2 Hr.         | 1          |
| Boats          | Boat | Flat        | Port of Stockton | 20'    | 70         | 2    | 2     | Gas    | N/A   | 2 Hr.         | 1          |

| Equipment Type | Service | Type | Make/Model      | Location          | Sections | Length | Length | Conn | Flotation | Skirt | Dispatch Time |
|----------------|---------|------|-----------------|-------------------|----------|--------|--------|------|-----------|-------|---------------|
| Boom           | Inland  | Foam | Universal Slide | Water Slits 7 & 9 | 5'/50'   | 300'   | 300'   | a    | 8"        | 12"   | 2 Hr.         |

| Equipment Type | Type      | Make/Model     | Location      | Dispatch Time | # of Units | Info | Frequency |
|----------------|-----------|----------------|---------------|---------------|------------|------|-----------|
| Comms          | Telephone | Cellular       | Admin/Prt Dir | 1 Hr.         | 1          | None | N/A       |
| Comms          | Telephone | Cellular       | Admin/Prt Dir | 1 Hr.         | 4          | None | N/A       |
| Comms          | Radios    | Two-Way Marine | Port Police   | 1 Hr.         | Several    | None | Several   |

| Equipment Type | Type        | Make/Model  | Location         | Dispatch Time | # of Units | Power Src | Fitting Size | GPM   |
|----------------|-------------|-------------|------------------|---------------|------------|-----------|--------------|-------|
| Portable Pumps | Centrifugal | Caterpillar | Port of Stockton | 1 Hr.         | 2          | Diesel    | 4"           | 17000 |

| Equipment Type | Type  | Make/Model   | Location          | Length | Dispatch Time | # of Units | Info      |
|----------------|-------|--------------|-------------------|--------|---------------|------------|-----------|
| Sorbents       | Pads  | 3M, Type 151 | Storage Container | 1400'  | 2 Hr.         | 7 Bales    | 200' Pads |
| Sorbents       | Boom  | 3M, Type 270 | Storage Container | 840'   | 2 Hr.         | 21         | 4 x 10    |
| Sorbents       | Sweep | 3M, Type 270 | Storage Container | 400'   | 2 Hr.         | 10 Bags    | 4 x 10    |
| Sorbents       | Booms | 3M, Type 151 | Storage Container | 300'   | 2 Hr.         | 1.5 Bales  | 17 x 19   |

Point Arena Harbor

| Equipment Type | Organization       | Type    | Make/Model | Location           | Length   | Dispatch Time | # of Units | Info        |
|----------------|--------------------|---------|------------|--------------------|----------|---------------|------------|-------------|
| Sorbents       | Point Arena Harbor | Boom    | 3M         | Point Arena Harbor | 5000'    | 1/2 Hr.       | 1          | 8" Diameter |
| Sorbents       | Point Arena Harbor | Boom    | 3M         | Point Arena Harbor | 10'      | 1/2 Hr.       | 200        | 4" Diameter |
| Sorbents       | Point Arena Harbor | Sweep   | 3M         | Point Arena Harbor | 100'     | 1/2 Hr.       | 10         | None        |
| Sorbents       | Point Arena Harbor | Pillows | 3M         | Point Arena Harbor | 8" X 18" | 1/2 Hr.       | 125        | None        |

PG & E

| Equipment Type | Type         | Make/Model            | Location      | Length       | Horsepower | Crew       | Draft    | Fuel   | Cargo     | Disp Time | # of Units   |           |
|----------------|--------------|-----------------------|---------------|--------------|------------|------------|----------|--------|-----------|-----------|--------------|-----------|
| Boats          | Boat         | Inland Tug            | Moss Landing  | 65'          | 1200       | 2          | 6        | Diesel | Unknown   | 1/2 Hr.   | 1            |           |
| Boats          | Skiff        | Boston Whaler         | Moss Landing  | 21'          | 140        | 2          | 2        | Gas    | Unknown   | 1 Hr.     | 1            |           |
| Boats          | Skiff        | Steel Work Boat       | Moss Landing  | 20'          | 160        | 2          | 2        | Diesel | Unknown   | 1/2 Hr.   | 2            |           |
| Boats          | Boat         | Tug                   | Moss Landing  | 50'          | 500        | 3          | 3 1/2    | Diesel | 1000 Gal  | 1 Hr.     | 1            |           |
| Equipment Type | Service      | Type                  | Make/Model    | Location     | Sections   | Length     | Length   | Conn   | Flotation | Skirt     | Transp       | Disp Time |
| Boom           | Ocean        | Infl                  | Expandi-Boom  | Moss Landing | 4' / 250'  | 1000'      | 1000'    | j      | 10"       | 33"       | Moss Landing | 1 Hr.     |
| Boom           | Inland       | Infl                  | Expandi-Boom  | Moss Landing | 4' / 250'  | 1000'      | N/A      | i      | 5"        | 15"       | Reel Truck   | 1/2 Hr.   |
| Boom           | Inland       | Infl                  | Kepner 1418   | Moss Landing | 4' / 250'  | 1000'      | N/A      | h      | 5"        | 19"       | Reel Trailer | 1 Hr.     |
| Boom           | Inland       | Infl                  | Kepner 1216   | Moss Landing | 12' / 250' | 3000'      | 3000'    | i      | 10"       | 25"       | Launch       | 1/2 Hr.   |
| Equipment Type | Type         | Make/Model            | Location      | Disp Time    | # of Units | Info       | Freq     |        |           |           |              |           |
| Comms          | Base Station | Motorola              | Control Room  | 5 Min.       | 1          | None       | Several  |        |           |           |              |           |
| Comms          | Radio        | Motorola              | Moss Landing  | 5 Min.       | 15         | Portable   | Several  |        |           |           |              |           |
| Comms          | Marine VHF   | Motorola              | PG&E Workboat | 5 Min.       | 1          | None       | Several  |        |           |           |              |           |
| Comms          | Cell Phones  | Unknown               | Moss Landing  | 5 Min.       | 1          | None       | N/A      |        |           |           |              |           |
| Equipment Type | Type         | Make/Model            | Location      | Disp Time    | # of Units | Power Src  | Fitting  | GPM    |           |           |              |           |
| Portable Pumps | Centrifugal  | Ford                  | Humbolt Bay   | 1 Hr.        | 2          | Hydraulic  | 4"       | 500    |           |           |              |           |
| Equipment Type | Type         | Make/Model            | Location      | Length       | Disp Time  | # of Units | Recovery |        |           |           |              |           |
| Skimmers       | Weir         | Vikoma Komara Mark II | Moss Landing  |              | 1/2 Hr.    | 1          | 41       |        |           |           |              |           |
| Skimmers       | Weir         | Wolosep I             | Moss Landing  |              | 1/2 Hr.    | 1          | 960      |        |           |           |              |           |
| Equipment Type | Type         | Make/Model            | Location      | Length       | Disp Time  | # of Units | Info     |        |           |           |              |           |
| Sorbents       | Pads         | 3M                    | Humbolt Bay   | N/A          | 1/2 Hr.    | 400 Bales  | None     |        |           |           |              |           |
| Sorbents       | Boom         | Sea Curtain           | Humbolt Bay   | N/A          | 1/2 Hr.    | 1          | 50'      |        |           |           |              |           |
| Sorbents       | Pads         | Type 156              | Moss Landing  | N/A          | 1/2 Hr.    | 40 Bales   | None     |        |           |           |              |           |
| Sorbents       | Mop          | Oilsnare              | Moss Landing  | N/A          | 1/2 Hr.    | 140 Boxes  | None     |        |           |           |              |           |
| Sorbents       | Pads         | Navy Brand            | Moss Landing  | N/A          | 1/2 Hr.    | 42 Boxes   | None     |        |           |           |              |           |

**Pennzoil Alameda Packaging Plant**

| Equipment Type | Type  | Make/Model | Location | Length | Horsepower | Crew | Draft | Fuel | Cargo cap/wt | Dispatch Time | # of Units |
|----------------|-------|------------|----------|--------|------------|------|-------|------|--------------|---------------|------------|
| Boats          | Skiff | Bayliner   | Alameda  | 16'    | 90         | 2    | 2     | Gas  | Unknown      | 1/2 Hr.       | 1          |

| Equipment Type | Service | Type    | Make/Model         | Location | Sections | Length | Length | Connector | Flotation | Skirt | Transportation | Dispatch Time |
|----------------|---------|---------|--------------------|----------|----------|--------|--------|-----------|-----------|-------|----------------|---------------|
| Boom           | Ocean   | Curtain | Containment System | Alameda  | 10'/100' | 700'   | 700'   | a         | 4"        | 6"    | Truck          | 2 Hr.         |
| Boom           | Ocean   | Curtain | Containment System | Alameda  | 10'/100' | N/A    | N/A    | a         | 6"        | 12"   | Truck          | 2 Hr.         |

**Paco**

| Equipment Type        | Type        | Make/Model | Location | Dispatch Time | # of Units | Info         | Power Source | Rated Amps |
|-----------------------|-------------|------------|----------|---------------|------------|--------------|--------------|------------|
| Electrical Generators | Generator   | GE         | Oakland  | 4 Hr.         | 12         | None         | Diesel       | 5          |
| Electrical Generators | Generator   | GE         | Oakland  | 4 Hr.         | 6          | None         | Diesel       | 10         |
| Electrical Generators | Lights      | Quartz     | Oakland  | 4 Hr.         | 6          | 32' Tower    | Electricity  | 4          |
| Equipment Type        | Type        | Make/Model | Location | Dispatch Time | # of Units | Power Source | Fitting Size | GPM        |
| Portable Pumps        | Centrifugal | Univac     | Oakland  | 3 Hr.         | 12         | Hydraulic    | 8"           | 350        |
| Portable Pumps        | Centrifugal | Unknown    | Oakland  | 3 Hr.         | 12         | Hydraulic    | 6"           | 200        |
| Portable Pumps        | Centrifugal | Unknown    | Oakland  | 3 Hr.         | 12         | Hydraulic    | 6"           | 200        |

F-29-SFB

F - 30 - STEB

**Pacific Strike Team**

| Equipment Type        | Type         | Make/Model        | Location     | Disp Time    | # of Units | Storage Cap | Info         |            |             |                |            |
|-----------------------|--------------|-------------------|--------------|--------------|------------|-------------|--------------|------------|-------------|----------------|------------|
| Barges/Storage        | Barge        | Dracone, Type F   | PST - Novato | 1 Hr.        | 1          | 1200        | None         |            |             |                |            |
| Barges/Storage        | Barge        | Dracone, Type F   | PST - Kodiak | 1 Hr.        | 2          | 1200        | None         |            |             |                |            |
| Barges/Storage        | Barge        | Dracone, Type O   | DMS Martinez | 1 Hr.        | 1          | 6900        | None         |            |             |                |            |
| Barges/Storage        | Barge        | Lance             | Clean Bay    | 1 Hr.        | 6          | 63          | None         |            |             |                |            |
| Equipment Type        | Type         | Make/Model        | Location     | Length       | Horsepower | Crew        | Draft        | Fuel       | Cargo cap/w | Disp Time      | # of Units |
| Boats                 | Boat         | Munson            | PST - Novato | 32'          | 400        | 2           | 2 1/2        | Gas        | 3200 lbs    | 1 Hr.          | 1          |
| Boats                 | Boat         | Avon Inflatable   | PST - Novato | 21'          | 165        | 2           | 3            | Gas        | 2400 lbs    | 1 Hr.          | 1          |
| Boats                 | Boat         | Avon Inflatable   | PST - Novato | 15'          | 40         | 2           | 1 1/2        | Gas        | 1200 lbs    | 1 Hr.          | 8          |
| Boats                 | Boat         | Hurricane RHI     | PST - Novato | 17'          | 80         | 2           | 2            | Gas        | 1600 lbs    | 1 Hr.          | 1          |
| Boats                 | Sled         | Fast Surf Del     | PST, LB, Sea | 45'          | N/A        | 2           | 2            | Gas        | 20000 lbs   | 1 Hr.          | 1          |
| Equipment Type        | Service      | Type              | Make/Model   | Location     | Sections   | Length      | Length       | Flotation  | Skirt       | Transp         | Disp Time  |
| Boom                  | Ocean        | Fence             | OWOCR        | PST - Novato | 18'/612'   | 612'        | 612'         | 20"        | 75"         | C-130 on Truck | 1 Hr.      |
| Boom                  | Ocean        | Infl              | Oil Stop     | PST - Novato | N/A        | 656'        | N/A          | 19"        | 24"         | C-130 on Truck | 1 Hr.      |
| Boom                  | Ocean        | Fence             | Voss Systems | PST - Novato | 4'/50'     | 200'        | 200'         | 19"        | 25"         | C-130 on Truck | 1 Hr.      |
| Equipment Type        | Type         | Make/Model        | Location     | Disp Time    | # of Units | Power Src   | Fitting Size | GPM        |             |                |            |
| Transfer Pumps        | Submersible  | CCM 150-5C        | PST - Novato | 1 Hr.        | 7          | Electrical  | 6"           | 1200       |             |                |            |
| Transfer Pumps        | Submersible  | TK5 Framo         | PST - Novato | 1 Hr.        | 2          | Electrical  | 6"           | 1200       |             |                |            |
| Transfer Pumps        | Submersible  | Sloane            | PST - Novato | 1 Hr.        | 2          | Electrical  | 6"           | 1200       |             |                |            |
| Transfer Pumps        | Centrifugal  | Multi-Quip        | PST - Novato | 1 Hr.        | 3          | Electrical  | 6"           | 1200       |             |                |            |
| Transfer Pumps        | Centrifugal  | Master            | PST - Novato | 1 Hr.        | 3          | Electrical  | 6"           | 1200       |             |                |            |
| Equipment Type        | Type         | Make/Model        | Location     | Disp Time    | # of Units | Info        | Frequency    |            |             |                |            |
| Comms                 | Radio        | Saber             | PST - Novato | Immediate    | 60         | None        | Various      |            |             |                |            |
| Comms                 | Base Station | Spectra VHF       | PST - Novato | N/A          | 17         | None        | Various      |            |             |                |            |
| Comms                 | Telephone    | Inmarsat TCS 9200 | PST - Novato | N/A          | 2          | None        | Various      |            |             |                |            |
| Comms                 | Cell Phones  | Various           | PST - Novato | Immediate    | 4          | None        | Various      |            |             |                |            |
| Equipment Type        | Type         | Make/Model        | Location     | Disp Time    | # of Units | Info        | Power Src    | Rated Amps |             |                |            |
| Electrical Generators | Generator    | Gen-Pro           | PST - Novato | 1 Hr.        | 8          | None        | Diesel       | 10.5       |             |                |            |
| Electrical Generators | Generator    | Gen-Pro           | PST - Novato | 2 Hr.        | 2          | None        | Diesel       | 1          |             |                |            |
| Electrical Generators | Lighting     | Light Tower       | PST - Novato | 1 Hr.        | 6          | None        | Electricity  | N/A        |             |                |            |
| Equipment Type        | Type         | Make/Model        | Location     | Disp Time    | # of Units | Info        |              |            |             |                |            |
| Mobile Command Post   | Trailer      | Command Post      | PST - Novato | 4 Hr.        | 1          | 32 Feet     |              |            |             |                |            |

|                     |             |                   |                |           |            |           |              |     |
|---------------------|-------------|-------------------|----------------|-----------|------------|-----------|--------------|-----|
| Mobile Command Post | Trailer     | Command Post      | PST - Novato   | 4 Hr.     | 1          | 45 Feet   |              |     |
| Mobile Command Post | Chem. Van   | Command Post      | PST - Novato   | 4 Hr.     | 1          | 20 Feet   |              |     |
| Equipment Type      | Type        | Make/Model        | Location       | Disp Time | # of Units | Power Src | Fitting Size | GPM |
| Portable Pumps      | Centrifugal | Wilden M8         | PST - Novato   | 1 Hr.     | 2          | Gas       | 3"           | 140 |
| Equipment Type      | Type        | Make/Model        | Location       | Disp Time | # of Units | Recovery  | Storage Cap  |     |
| Skimmers            | Weir        | Desmi Archemedian | PST - Novato   | 1 Hr.     | 5          | 5000      | None         |     |
| Skimmers            | Weir        | GT-185            | Kodiak, Alaska | 1 Hr.     | 1          | 5000      | None         |     |

Pacific Refining Co.

|                |              |                          |                        |           |            |            |         |           |       |           |           |            |
|----------------|--------------|--------------------------|------------------------|-----------|------------|------------|---------|-----------|-------|-----------|-----------|------------|
| Equipment Type | Type         | Make/Model               | Location               | Length    | Length     | Hrspwr     | Crew    | Draft     | Fuel  | Cargo     | Disp Time | # of Units |
| Boats          | Skiff        | Livington                | Pacific Refinery Wharf | 12'       |            | 10         | 2       | 1         | Gas   | 800 lbs   | 1/2 Hr.   | 2          |
| Equipment Type | Type         | Make/Model               | Location               | Sections  | Length     | Length     | Conn    | Flotation | Skirt | Disp Time |           |            |
| Boom           | Curtain      | Kepner Sea Curtain       | Pacific Refinery Wharf | 8'/100'   | 2500'      | 2500'      | c       | 8"        | 12"   | N/A       |           |            |
| Equipment Type | Type         | Make/Model               | Location               | Disp Time | # of Units | Info       | Freq    |           |       |           |           |            |
| Comms          | Handheld     | Motorola /MRE GP300 Port | Pacific Refinery Wharf | 15 Min.   | 4          | None       | Several |           |       |           |           |            |
| Comms          | Handheld     | Motorola /Radius P5 Port | Pacific Refinery Wharf | 15 Min.   | 3          | None       | Several |           |       |           |           |            |
| Comms          | Handheld     | Bendix King - VHF Ch. 18 | Pacific Refinery Wharf | 15 Min.   | 1          | None       | Several |           |       |           |           |            |
| Comms          | Base Station | Unknown                  | Pacific Refinery Wharf | N/A       | 1          | None       | Several |           |       |           |           |            |
| Equipment Type | Type         | Make/Model               | Location               | Length    | Disp Time  | # of Units | Info    |           |       |           |           |            |
| Sorbents       | Boom         | Sausage                  | Pacific Refinery Wharf | 10'       | 1/2 Hr.    | 12 Bales   | None    |           |       |           |           |            |
| Sorbents       | Boom         | 3M                       | Plant Trailer          | 10'       | 1/2 Hr.    | 40 Bales   | None    |           |       |           |           |            |
| Sorbents       | Sweeps       | Unknown                  | Pacific Refinery Wharf | 100'      | 1/2 Hr.    | 10         | None    |           |       |           |           |            |
| Sorbents       | Sweeps       | 3M                       | Plant Trailer          | 100'      | 1/2 Hr.    | 25         | None    |           |       |           |           |            |
| Sorbents       | Sheets       | 3M                       | Pacific Refinery Wharf | N/A       | 1/2 Hr.    | 4          | None    |           |       |           |           |            |
| Sorbents       | Sheets       | 3M                       | Pacific Refinery Wharf | N/A       | 1/2 Hr.    | 12         | None    |           |       |           |           |            |
| Sorbents       | Diapers      | 3M                       | Plant Trailer          | N/A       | 1/2 Hr.    | 30         | None    |           |       |           |           |            |
| Sorbents       | Particulant  | Unknown                  | Plant Trailer          | N/A       | 1/2 Hr.    | 12         | None    |           |       |           |           |            |

F - 31 - SEB

**Oil Conservation Service Inc.**

| Equipment Type       | Type            | Make/Model    | Location      | Dispatch Time | # of Units    | Storage Cap.(bbls) | Info         |         |
|----------------------|-----------------|---------------|---------------|---------------|---------------|--------------------|--------------|---------|
| Barges/Storage       | Drums           | DOT 17th      | Yard - Fresno | 4 Hr.         | 100           | 1 ea               | None         |         |
|                      |                 |               |               |               |               |                    |              |         |
| Equipment Type       | Type            | Make/Model    | Location      | Dispatch Time | # of Units    | Power Source       | Fitting Size | GPM     |
| Cargo Transfer Pumps | Diaphram        | Wilden (Dual) | Yard - Fresno | 2 Hr.         | 1             | Air                | 1"           | Various |
| Cargo Transfer Pumps | Diaphram        | Wilden (Dual) | Yard - Fresno | 2 Hr.         | 1             | Air                | 2"           | Various |
| Cargo Transfer Pumps | Diaphram        | Wilden (Dual) | Yard - Fresno | 2 Hr.         | 1             | Air                | 2"           | Various |
| Cargo Transfer Pumps | Diaphram        | Mud Hog       | Yard - Fresno | 2 Hr.         | 2             | Air                | 2'           | Various |
|                      |                 |               |               |               |               |                    |              |         |
| Equipment Type       | Type            | Make/Model    | Location      | Length        | Dispatch Time | # of Units         | Info         |         |
| Sorbents             | Boom            | Pig           | Yard - Fresno | 6" Diameter   | 2 Hr.         | 8                  | None         |         |
| Sorbents             | Roll            | Pig           | Yard - Fresno | 36" x 200"    | 2 Hr.         | 1                  | None         |         |
| Sorbents             | Pads            | Pig           | Yard - Fresno | 24"           | 2 Hr.         | 3 Bales            | None         |         |
|                      |                 |               |               |               |               |                    |              |         |
| Equipment Type       | Type            | Make/Model    | Location      | Dispatch Time | # of Units    | Storage Cap.(bbls) | Info         |         |
| Vacuum Trucks        | Tractor/Trailer | Kenworth      | Yard - Fresno | 1 Hr.         | 1             | 4200               | None         |         |
| Vacuum Trucks        | Freightliner    | Unknown       | Yard - Fresno | 1 Hr.         | 1             | 3000               | None         |         |



Pacific Link Environmental

| Equipment Type       | Type        | Make/Model           | Location           | Length       | Hrsepwer   | Crew       | Draft        | Fuel    | Cargo      | Disp Time | # of Units |       |
|----------------------|-------------|----------------------|--------------------|--------------|------------|------------|--------------|---------|------------|-----------|------------|-------|
| Boats                | DW Pkr      | Aluminum             | Various Vessels    | 32'          | Various    | 2          | Various      | Various | 16-54K lbs | 2-6 Hrs.  | 7          |       |
| Boats                | River PB    | USN Steel            | Petaluma, on Saxon | 51'          | 450        | 4          | 4            | Diesel  | 35000 lbs  | 2 Hr.     | 1          |       |
| Boats                | LCM         | USN Steel            | Petaluma or Rusty  | 45'          | 450        | 4          | 3            | Diesel  | 50000 lbs  | 2 Hr.     | 1          |       |
| Boats                | Skiff       | Steel                | Petaluma           | 15'          | 28         | 2          | 2 1/2        | Diesel  | 800 lbs    | 2 Hr.     | 1          |       |
| Equipment Type       | Service     | Type                 | Make/Model         | Location     | Sections   | Length     | Length       | Conn    | Flotation  | Skirt     | Transpor   | Disp  |
| Boom                 | Inland      | Curtain              | AFTBCH             | Petaluma     | 6'/100'    | 300'       | N/A          | g       | 8"         | 12"       | Boat/Truck | 1 Hr. |
| Boom                 | Inland      | Curtain              | American           | Vacaville    | 6'/100'    | 1200'      | N/A          | c       | 10"        | 13"       | Truck      | 2 Hr. |
| Equipment Type       | Type        | Make/Model           | Location           | Disp Time    | # of Units | Power Src  | Fitting      | GPM     |            |           |            |       |
| Cargo Transfer Pumps | Centrifugal | PTO 7                | Each vessel        | 2 Hr.        | Several    | Hydraulic  | 2"           | 16      |            |           |            |       |
| Equipment Type       | Type        | Make/Model           | Location           | Disp Time    | # of Units | Info       | Frequency    |         |            |           |            |       |
| Comms                | Radio VHF   | King 7000            | Various Vessels    | Immediate    | 3          | None       | Various      |         |            |           |            |       |
| Comms                | Radio VHF   | Raytheon/Aleco       | Various Vessels    | Immediate    | 3          | None       | Various      |         |            |           |            |       |
| Comms                | Radio VHF   | West Marine Alpha Ht | Onboard the Rusty  | Immediate    | 1          | None       | Various      |         |            |           |            |       |
| Comms                | Cell Phones | Various              | Onboard the Rusty  | Immediate    | Several    | None       | Various      |         |            |           |            |       |
| Equipment Type       | Type        | Make/Model           | Location           | Disp Time    | # of Units | Power Src  | Fitting      | GPM     |            |           |            |       |
| Portable Pumps       | Centrifugal | Kedder               | Petaluma           | 2 Hr.        | 1          | Hydraulic  | 2"           | 125     |            |           |            |       |
| Portable Pumps       | Trash       | Pace                 | Petaluma           | 2 Hr.        | 4          | Hydraulic  | 3"           | 150     |            |           |            |       |
| Equipment Type       | Type        | Make/Model           | Location           | Disp Time    | # of Units | Recovery   | Storage      |         |            |           |            |       |
| Skimmers             | Weir        | Douglas              | Concord            | 2 Hr.        | 2          | 60         | None         |         |            |           |            |       |
| Equipment Type       | Type        | Make/Model           | Location           | Length       | Disp Time  | # of Units | Info         |         |            |           |            |       |
| Sorbents             | Boom        | 3M                   | Petaluma           | 3" X 8"      | 1 Hr.      | 18         | None         |         |            |           |            |       |
| Sorbents             | Boom        | 3M                   | Petaluma           | 4" X 4"      | 1 Hr.      | 36         | None         |         |            |           |            |       |
| Sorbents             | Pads        | 3M                   | Petaluma           | 3/16"X17"X19 | 2 Hr.      | 5          | 100 Per Bale |         |            |           |            |       |
| Sorbents             | Sock        | 3M                   | Petaluma           | 2" X 36"     | 2 Hr.      | 2          | 6 Per Case   |         |            |           |            |       |

F-34-51B

**O.H.M. Remediation Services Corp.**

| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Info                 | Frequency    |         |       |           |            |
|-----------------------|--------------|----------------------|---------------------|----------|------------|----------------------|--------------|---------|-------|-----------|------------|
| Barges/Storage        | Tank         | Portable - Poly      | San Leandro Warehou | 4 Hr.    | 2          | None                 | 6500         |         |       |           |            |
| Barges/Storage        | Tank         | Portable - Steel     | San Leandro Warehou | 4 Hr.    | 1          | None                 | 10000        |         |       |           |            |
| Barges/Storage        | Tank         | Portable - Steel     | San Leandro Warehou | 4 Hr.    | 1          | None                 | 5000         |         |       |           |            |
| Barges/Storage        | Tank         | Portable - Steel     | San Leandro Warehou | 4 Hr.    | 3          | None                 | 300          |         |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Length   | Horsepower | Crew                 | Draft        | Fuel    | Cargo | Disp Time | # of Units |
| Boats                 | Boat         | Aluminum             | San Leandro Warehou | 16'      | 150        | 3                    | 1 1/2        | Gas     | N/A   | 2 Hr.     | 8          |
| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Info                 | Frequency    |         |       |           |            |
| Comms                 | Radio        | Motorola HP90/MT 150 | San Leandro Warehou | 4 Hr.    | 36         | Portable             | Several      |         |       |           |            |
| Comms                 | Base Station | Motorola             | San Leandro Warehou | 4 Hr.    | 2          | None                 | Several      |         |       |           |            |
| Comms                 | Cell Phones  | OKI                  | San Leandro Warehou | 4 Hr.    | 24         | None                 | Several      |         |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Info                 | Pwr Src      | Amps    |       |           |            |
| Electrical Generators | Generator    | Honda                | San Leandro Warehou | 4 Hr.    | 4          | None                 | Diesel       | 6.5     |       |           |            |
| Electrical Generators | Lights       | Honda                | San Leandro Warehou | 4 Hr.    | 1          | None                 | Electricity  | 10      |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Info                 | Frequency    |         |       |           |            |
| Mobile Command Post   | Trailer      | Custom Made          | San Leandro Warehou | 4 Hr.    | 4          | 45', Office, Showers |              |         |       |           |            |
| Mobile Command Post   | Trailer      | Custom Made          | San Leandro Warehou | 4 Hr.    | 3          | 28', Office, Showers |              |         |       |           |            |
| Mobile Command Post   | Truck        | Response Type        | San Leandro Warehou | 4 Hr.    | 1          | 2 Tons               |              |         |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Power Source         | Fitting Size | GPM     |       |           |            |
| Portable Pumps        | Centrifugal  | B&H                  | San Leandro Warehou | 4 Hr.    | 9          | Hydraulic            | 4" & 6"      | 125-160 |       |           |            |
| Portable Pumps        | Centrifugal  | B&H                  | San Leandro Warehou | 4 Hr.    | 1          | Hydraulic            | 8"           | 200     |       |           |            |
| Portable Pumps        | Diaphram     | Sand Piper           | San Leandro Warehou | 4 Hr.    | 8          | Air                  | 2"           | 115     |       |           |            |
| Portable Pumps        | Diaphram     | Sand Piper           | San Leandro Warehou | 4 Hr.    | 12         | Air                  | 3"           | 120     |       |           |            |
| Portable Pumps        | Submersible  | Unknown              | San Leandro Warehou | 4 Hr.    | 16         | Electricity          | 2" - 6"      | Various |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Length   | Disp Time  | # of Units           | Info         |         |       |           |            |
| Sorbents              | Boom         | 3M Petro             | San Leandro Warehou | 10'      | 4 Hr.      | 40 Bales             | None         |         |       |           |            |
| Sorbents              | Pads         | 3M                   | San Leandro Warehou | N/A      | 4 Hr.      | 100 Bales            | None         |         |       |           |            |
| Equipment Type        | Type         | Make/Model           | Location            | Disp Tim | # of Units | Storage Cap.(bbl     | Info         |         |       |           |            |
| Vacuum Trucks         | Vac Units    | Skid Mounted         | San Leandro Warehou | 4 Hr.    | 4          | 1500 ea              | None         |         |       |           |            |

Noyo Harbor

| Equipment Type | Type    | Make/Mod | Location    | Length   | Dispatch Tim | # of Unit | Info         |
|----------------|---------|----------|-------------|----------|--------------|-----------|--------------|
| Sorbents       | Boom    | 3M       | Hoyo Harbor | 10'      | 1/2 Hr.      | 56        | 4" Diameter  |
| Sorbents       | Sweep   | 3M       | Hoyo Harbor | 100'     | 1/2 Hr.      | 10        | 18" Diameter |
| Sorbents       | Pillows | 3M       | Hoyo Harbor | 8" X 18" | 1/2 Hr.      | 60        | None         |

Navy Rough & Ready Island

| Equipment Type | Type | Make/Model    | Location             | Length | Horsepower | Crew | Draft | Fuel | Cargo cap/ | Dispatch Tim | # of Units |
|----------------|------|---------------|----------------------|--------|------------|------|-------|------|------------|--------------|------------|
| Boats          | Boat | Boston Whaler | Bldg. 12, On Trailer | 22'    | 100        | 2    | 1 1/2 | Gas  | 600        | 1-2 Hr.      | 1          |
| Boats          | Boat | Boston Whaler | Bldg. 12, On Trailer | 22'    | 100        | 2    | 1 1/2 | Gas  | 600        | 1 Hr.        | 1          |

| Equipment Type | Service | Type | Make/Model | Location   | Sections | Length | Length | Conn | Flotation | Skirt | Transportatio | Dispatch Time |
|----------------|---------|------|------------|------------|----------|--------|--------|------|-----------|-------|---------------|---------------|
| Boom           | Ocean   | Infl | PS1        | Bldg. 12   | 6'/100'  | 2000'  | N/A    | d    | 7"        | 14"   | Trailer       | 2 Hr.         |
| Boom           | Ocean   | Infl | PS1        | Bldg. T111 | 6'/100'  | 2000'  | N/A    | d    | 7"        | 14"   | Trailer       | 2 Hr.         |
| Boom           | Ocean   | Infl | PS1        | Bldg. 117  | 6'/100'  | 1000'  | N/A    | d    | 7"        | 14"   | Trailer       | 2 Hr.         |

| Equipment Type | Type        | Make/Model      | Location            | Dispatch Tim | # of Units | Info | Frequency |
|----------------|-------------|-----------------|---------------------|--------------|------------|------|-----------|
| Comms          | Base Statio | Motorola        | Fire Station        | N/A          | 1          | None | Several   |
| Comms          | Mobile      | Motorola        | Pick-ups & Engineer | 15 Min.      | 5          | None | Several   |
| Comms          | Portable    | Motorola Saber  | Fire Engines        | 15 Min.      | 4          | None | Several   |
| Comms          | Portable    | Motorola ET 200 | Fire Station        | 15 Min.      | 2          | None | Several   |

| Equipment Type       | Type      | Make/Model | Location    | Dispatch Tim | # of Units | Info    | Power Sour  | GPM  |
|----------------------|-----------|------------|-------------|--------------|------------|---------|-------------|------|
| Electrical Generator | Generator | Honda      | Fire Trucks | 2 Hr.        | 1          | None    | Diesel      | 12.5 |
| Electrical Generator | Generator | Honda      | Bldg. T111  | 2 Hr.        | 4          | Telescp | Electricity | N/A  |

| Equipment Type | Type | Make/Model | Location | Length | Dispatch Tim | # of Unit | Info           |
|----------------|------|------------|----------|--------|--------------|-----------|----------------|
| Sorbents       | Boom | Pig        | Bldg. 12 | 300'   | 1 Hr.        | 30 Bags   | 5"             |
| Sorbents       | Boom | Pig        | Bldg. 12 | 300'   | 1 Hr.        | 30 Bags   | 8"             |
| Sorbents       | Pads | Pig        | Bldg. 12 | N/A    | 1 Hr.        | 3 Bundles | 100 Per Bundle |

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Navy Global - Supsalv

| Equipment Type | Type    | Make/Model    | Location            | Disp Tim | # of Units | Storage Ca | Info |
|----------------|---------|---------------|---------------------|----------|------------|------------|------|
| Barges/Storage | Dracone | Dunlop Type L | NAVCOMSTA R&R Islan | 4 Hr.    | 4          | 3238       | None |

| Equipment Type | Type | Make/Model     | Location            | Length | Horsepow | Crew | Draft | Fuel | Cargo | Disp Time |
|----------------|------|----------------|---------------------|--------|----------|------|-------|------|-------|-----------|
| Boats          | Boat | Workboat       | NAVCOMSTA R&R Islan | 18'    | 120      | 1    | 1     | Gas  | None  | 4 Hr.     |
| Boats          | Boat | Infl           | NAVCOMSTA R&R Islan | 15-23' | 140      | 1    | 1     | Gas  | None  | 4 Hr.     |
| Boats          | Boat | Rigid Boom Kan | NAVCOMSTA R&R Islan | 24'    | 285      | 1    | 1     | Gas  | None  | 4 Hr.     |

| Equipment Type | Service | Type | Make/Model | Location  | Sections | Length | Length | Connector | Flotation | Skirt | Transpor    | Disp Time |
|----------------|---------|------|------------|-----------|----------|--------|--------|-----------|-----------|-------|-------------|-----------|
| Boom           | Ocean   | Infl | Goodyear   | Bldg. 606 | 10'/55'  | 400'   | N/A    | g         | 14"       | 24"   | Vans        | 4 Hr.     |
| Boom           | Ocean   | Infl | Goodyear   | Bldg. 606 | 10'/55'  | 2400'  | N/A    | g         | 14"       | 24"   | On Skimmers | 4 Hr.     |
| Boom           | Ocean   | Foam | Trelleborg | Bldg. 606 | 10'/55'  | 360'   | N/A    | g         | 14"       | 24"   | Palletized  | 4 Hr.     |

| Equipment Type      | Type        | Make/Model     | Location            | Disp Tim | # of Units | Pwr Src   | Fitting Size | GPM     |
|---------------------|-------------|----------------|---------------------|----------|------------|-----------|--------------|---------|
| Cargo Transfer Pump | Centrifugal | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 56         | Hydraulic | 3"           | Various |
| Cargo Transfer Pump | Centrifugal | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 30         | Hydraulic | 6"           | Various |
| Cargo Transfer Pump | Centrifugal | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 76         | Hydraulic | 10"          | Various |
| Cargo Transfer Pump | Submersible | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 11         | Hydraulic | 1.5"         | Various |
| Cargo Transfer Pump | Submersible | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 3          | Hydraulic | 2.5"         | Various |
| Cargo Transfer Pump | Submersible | Dewater        | NAVCOMSTA R&R Islan | 4 Hr.    | 28         | Hydraulic | 4"           | Various |
| Cargo Transfer Pump | Submersible | Pollution Xfer | NAVCOMSTA R&R Islan | 4 Hr.    | 4          | Hydraulic | 6"           | Various |
| Cargo Transfer Pump | Jet         | Transfer       | NAVCOMSTA R&R Islan | 4 Hr.    | 10         | Hydraulic | 2.5"         | Various |
| Cargo Transfer Pump | Jet         | Transfer       | NAVCOMSTA R&R Islan | 4 Hr.    | 3          | Hydraulic | 6"           | Various |

| Equipment Type        | Type      | Make/Model | Location            | Disp Tim | # of Units | Info | Pwr Src | Rated Amps |
|-----------------------|-----------|------------|---------------------|----------|------------|------|---------|------------|
| Electrical Generators | Generator | Okan       | NAVCOMSTA R&R Islan | 4 Hr.    | 38         | None | Diesel  | 5          |
| Electrical Generators | Generator | Okan       | NAVCOMSTA R&R Islan | 4 Hr.    | 8          | None | Diesel  | 30         |

| Equipment Type      | Type    | Make/Model      | Location            | Disp Tim | # of Units | Info |
|---------------------|---------|-----------------|---------------------|----------|------------|------|
| Mobile Command Post | Trailer | Command Trailer | NAVCOMSTA R&R Islan | 3 Hr.    | 1          | None |
| Mobile Command Post | Van     | Command Van     | NAVCOMSTA R&R Islan | 3 Hr.    | 1          | None |

| Equipment Type | Type    | Make/Model    | Location             | Disp Tim | # of Units | Pwr Src | Fitting Size | GPM     |
|----------------|---------|---------------|----------------------|----------|------------|---------|--------------|---------|
| Portable Pumps | Various | Multi-Capable | Contact Joe Stamouse | 4 Hr.    | Several    | Various | Various      | Various |

| Equipment Type | Type      | Make/Model | Location            | Disp Tim | # of Units | Recovery | Storage Cap |
|----------------|-----------|------------|---------------------|----------|------------|----------|-------------|
| Skimmers       | Self Prop | Class V    | NAVCOMSTA R&R Islan | 4 Hr.    | 6          | 2400     | 43          |

|          |           |                 |                     |       |   |      |    |
|----------|-----------|-----------------|---------------------|-------|---|------|----|
| Skimmers | Self Prop | VB - Marco      | NAVCOMSTA R&R Islan | 4 Hr. | 4 | 2400 | 32 |
| Skimmers | Voss      | Destroil DS 210 | NAVCOMSTA R&R Islan | 4 Hr. | 2 | 2400 | 0  |
| Skimmers | Oil Mop   | Oil Absorption  | NAVCOMSTA R&R Islan | 4 Hr. | 2 | 1200 | 0  |

**Naval Weapons Station Concord**

| Equipment Typ | Type | Make/Model   | Location              | Length | Horsepow | Crew | Draft | Fuel   | Cargo cap/ | Dispatch Tim | # of Units |
|---------------|------|--------------|-----------------------|--------|----------|------|-------|--------|------------|--------------|------------|
| Boats         | Boat | Utility      | Tug Pier (46 Passenge | 33'    | 455      | 3    | 3     | Diesel | 7000 lbs   | 5 Min        | 1          |
| Boats         | Boat | LCM-6        | Tug Pier              | 50'    | 742      | 4    | 5     | Diesel | 30900 lbs  | 5 Min        | 1          |
| Boats         | Boat | Fire         | Tug Pier              | 27'    | 450      | 3    | 3     | Diesel | N/A        | 1 Hr.        | 1          |
| Boats         | Boat | Boston Whale | Tug Pier              | 17'    | 90       | 2    | 2     | Gas    | 700        | 1/2 Hr.      | 1          |

| Equipment Typ | Servic | Type | Make/Model       | Location     | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|---------------|--------|------|------------------|--------------|----------|--------|--------|----------|-----------|-------|---------------|---------------|
| Boom          | Inland | II   | Slick Bar Mark 8 | Pier Concord | 5'/50'   | 2200'  | 2200'  | d        | 10"       | 14"   | N/A           | N/A           |
| Boom          | Inland | II   | Slick Bar Mark E | Barge        | 5'/50'   | 500'   | N/A    | a        | 8"        | 14"   | Barge         | 1 Hr.         |
| Boom          | Inland | II   | Slick Bar Mark 9 | Pier Concord | 2'/50'   | 500'   | 500'   | a        | 10"       | 14"   | N/A           | N/A           |
| Boom          | Inland | II   | Slick Bar Mark E | On Barge     | 5'/50'   | 3350'  | 1500'  | d        | 12"       | 22"   | Small Boat    | 1 Hr.         |

| Equipment Typ | Type    | Make/Model | Location            | Dispatch Tim | # of Units | Recover | Storage Cap.(bbls) |
|---------------|---------|------------|---------------------|--------------|------------|---------|--------------------|
| Skimmers      | Belt    | Alden      | On Deployable Barge | 1 Hr.        | 1          | 8640    | 300                |
| Skimmers      | Suction | Skim Pak   | Mobile              | 1 Hr.        | 1          | 8640    | 300                |

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Naval Station Treasure Island

| Equipment Typ  | Type | Make/Model           | Location      | Dispatch Tim | # of Units | Storage Cap | Info      |
|----------------|------|----------------------|---------------|--------------|------------|-------------|-----------|
| Barges/Storage | Tank | Metal Holding        | Work Boat, TI | 1 Hr.        | 1          | 12          | None      |
| Barges/Storage | Tank | SCPT 300 Pillow Tank | Pier 12, TI   | 1 Hr.        | 2          | 7           | None      |
| Barges/Storage | Tank | Metal Holding        | Pier 12, TI   | N/A          | 1          | 5           | Permanent |

| Equipment Typ | Type | Make/Model    | Location          | Length | Horsepow | Crew | Draft | Fuel   | Cargo     | Dispatch Time |
|---------------|------|---------------|-------------------|--------|----------|------|-------|--------|-----------|---------------|
| Boats         | Boat | LCM-6         | Port Services, TI | 50'    | 160      | 2    | 8     | Diesel | Unlimited | 1 Hr.         |
| Boats         | Boat | Boston Whaler | Port Services, TI | 18'    | 155      | 3    | 1 1/2 | Gas    | 1000      | 1-6 Hr.       |
| Boats         | Boat | Boston Whaler | Port Services, TI | 25'    | 310      | 3    | 1     | Gas    | 2000      | 1-6 Hr.       |
| Boats         | Boat | Pontoon       | Port Services, TI | 32'    | 230      | 3    | 2     | Gas    | 6000      | 1 Hr.         |

| Equipment Typ | Service | Type  | Make/Model          | Location         | Sections | Length | Length | Conn | Flotation | Skirt | Transportatio | Dispatch Time |
|---------------|---------|-------|---------------------|------------------|----------|--------|--------|------|-----------|-------|---------------|---------------|
| Boom          | Inland  | Fence | AFTI - Class 2      | Port Services, T | 4'/50'   | 6100'  | 1500'  | c    | 10"       | 24"   | Boat/Truck    | 1 Hr.         |
| Boom          | Inland  | Fence | Spill Dams, Class 3 | Port Services, T | 4'/50'   | 2550'  | 1500'  | c    | 12"       | 24"   | Boat/Truck    | 1 Hr.         |

| Equipment Typ  | Type      | Make/Model      | Location             | Dispatch Tim | # of Units | Power Sour | Fitting Size | GPM    |
|----------------|-----------|-----------------|----------------------|--------------|------------|------------|--------------|--------|
| Portable Pumps | Diaphragm | Sand Piper      | Pier 12, TI          | 1/2 Hr.      | 1          | Air        | 2"           | Varies |
| Portable Pumps | Trash     | Wisconsin Robin | Waterfront Division, | 1/2 Hr.      | 5          | Gas        | 2"           | 145    |

| Equipment Typ | Type    | Make/Model | Location    | Dispatch Tim | # of Units | Recovery | Storage Cap |
|---------------|---------|------------|-------------|--------------|------------|----------|-------------|
| Skimmers      | Belt    | Alden      | Pier 12, TI | 1 Hr.        | 1          | 200      | N/A         |
| Skimmers      | Suction | Skim Pak   | Pier 12, TI | 1 Hr.        | 1          | Unknown  | N/A         |

| Equipment Typ | Type       | Make/Model  | Location        | Dispatch Tim | # of Units | Info |
|---------------|------------|-------------|-----------------|--------------|------------|------|
| Sorbents      | 3MBoom     | 3M          | Treasure Island | 1/2 Hr.      | 29 Bags    | None |
| Sorbents      | Pads       | Type 156    | Treasure Island | 1/2 Hr.      | 1 Bale     | None |
| Sorbents      | Pads       | Foam        | Treasure Island | 1/2 Hr.      | 1 Box      | None |
| Sorbents      | Skeet      | Foam Rubber | Treasure Island | 1/2 Hr.      | 1 Roll     | None |
| Sorbents      | Rolls      | Type 100    | Treasure Island | 1/2 Hr.      | 13         | None |
| Sorbents      | Granules   | Abasco      | Treasure Island | 1/2 Hr.      | 29         | None |
| Sorbents      | Bag/Diaper | Type 126    | Treasure Island | 1/2 Hr.      | 9          | None |

| Equipment Typ | Type     | Make/Model  | Location        | Dispatch Tim | # of Units | Storage Cap | Info |
|---------------|----------|-------------|-----------------|--------------|------------|-------------|------|
| Vacuum Trucks | Flat Bed | Keith Nuber | Treasure Island | 1/2 Hr.      | 1          | 5           | None |

Naval Air Station Moffet Field

| Equipment Typ | Type | Make/Model   | Location     | Length | Horsepow | Crew | Draft | Fuel | # of Units |
|---------------|------|--------------|--------------|--------|----------|------|-------|------|------------|
| Boats         | Boat | Boston Whale | Moffet Field | 17'    | 10       | 33   | 2     | Gas  | 1          |

| Equipment Typ | Servic | Type | Make/Mod | Location             | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|---------------|--------|------|----------|----------------------|----------|--------|--------|----------|-----------|-------|---------------|---------------|
| Boom          | Ocean  | Foam | Optimax  | Bldg. 127, Moffet    | 8'/50'   | 1750'  | N/A    | d        | 6"        | 10"   | Palletized    | 2 Hr.         |
| Boom          | Ocean  | Foam | Optimax  | Box on Wharf, Moff   | 10'/50'  | 200'   | N/A    | d        | 6"        | 12"   | Boxed         | 2 Hr.         |
| Boom          | Ocean  | Foam | Optimax  | In the Water, Moffet | 10'/50'  | 650'   | 650'   | d        | 6"        | 12"   | N/A           | 2 Hr.         |
| Boom          | Ocean  | Foam | Orange   | Bldg. 127, Moffet    | 8'/50'   | 900'   | N/A    | b        | 6"        | 12"   | Palletized    | 2 Hr.         |

| Equipment Typ | Type | Make/Model   | Location     | Dispatch Time | # of Units | Recovery (bbls/d | Storage Cap.(bbls) |
|---------------|------|--------------|--------------|---------------|------------|------------------|--------------------|
| Skimmers      | A-4  | Crowley/Alde | Moffet Field | 4 Hr.         | 1          | 2100             | 6                  |

N.G. Chemical

| Equipment Typ | Type | Make/Model          | Location | Length     | Dispatch Tim | # of Units | Info |
|---------------|------|---------------------|----------|------------|--------------|------------|------|
| Sorbents      | Bags | Safe Stop Clay Powd | San Jose | 50 lbs ea  | 1 Hr.        | 250        | None |
| Sorbents      | Bags | Kitty Litter        | San Jose | 33 lbs ea  | 1 Hr.        | 200        | None |
| Sorbents      | Bags | Vermiculite         | San Jose | 100 lbs ea | 1 Hr.        | 100        | None |

| Equipment Typ | Type  | Make/Model      | Location | Dispatch Tim | # of Units | Storage Cap.(bbl | Info |
|---------------|-------|-----------------|----------|--------------|------------|------------------|------|
| Vacuum Trucks | Truck | Carbon Steel    | San Jose | 1/2 Hr.      | 1          | 120              | None |
| Vacuum Trucks | Truck | Stainless Steel | San Jose | 1/2 Hr.      | 1          | 120              | None |

MSO San Francisco Bay

| Equipment Typ | Type     | Make/Mod | Location                               | Section | Dispatch Tim | # of Unit | Info | Frequency |
|---------------|----------|----------|----------------------------------------|---------|--------------|-----------|------|-----------|
| Comms         | T1416 #1 | Motorola | Bldg. 14, Room 108, Coast Guard Island |         | Immediate    | 1         | None | Various   |
| Comms         | T1616 #2 | Motorola | Bldg. 14, Room 108, Coast Guard Island |         | Immediate    | 1         | None | Various   |

**MSD Concord**

| Equipment Type | Type | Make/Model   | Location             | Length | Horsepower | Crew | Draft | Fuel | Cargo cap/ | Dispatch Tim | # of Units |
|----------------|------|--------------|----------------------|--------|------------|------|-------|------|------------|--------------|------------|
| Boats          | Boat | Boston Whale | MSD Trailer - Concor | 46'    | 740        | 6    | 4     | Gas  | N/A        | 2 Hr.        | 1          |

| Equipment Type | Service | Type | Make/Model | Location    | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|----------------|---------|------|------------|-------------|----------|--------|--------|----------|-----------|-------|---------------|---------------|
| Boom           | Harbor  | II   | PSI        | MSD Concord | N/A      | 2000'  | N/A    | a        | 8"        | 16"   | Trailer       | 1 Hr.         |
| Boom           | Harbor  | II   | Texaboom   | MSD Concord | N/A      | 300'   | N/A    | a        | 4"        | 8"    | Trailer       | 1 Hr.         |

| Equipment Type     | Type       | Make/Model  | Location    | Dispatch Tim | # of Units | Info |
|--------------------|------------|-------------|-------------|--------------|------------|------|
| Mobile Command Pos | Motor Home | Mini Armory | MSD Concord | 2 Hr.        | 1          | 25'  |

| Equipment Type | Type  | Make/Model | Location    | Length | Dispatch Tim | # of Unit | Info |
|----------------|-------|------------|-------------|--------|--------------|-----------|------|
| Sorbents       | Boom  | Absorbent  | MSD Concord | 25'    | 2 Hr.        | 5         | None |
| Sorbents       | Rolls | 3M         | MSD Concord | 50'    | 2 Hr.        | 4         | None |
| Sorbents       | Pads  | 3M         | MSD Concord | N/A    | 2 Hr.        | 4         | None |



Marine Spill Response Corp.

| Equipment Type | Type  | Make/Model          | Location      | Disp Time | # of Units | Storage Ca | Info |
|----------------|-------|---------------------|---------------|-----------|------------|------------|------|
| Barges/Storage | Barge | Shuttle             | MSRC Eureka   | 2 Hr.     | 6          | 1500       | None |
| Barges/Storage | Barge | MSRC 452            | MSRC Richmond | 2 Hr.     | 1          | 53000      | None |
| Barges/Storage | Barge | TSB Small           | MSRC Richmond | 2 Hr.     | 17         | 500        | None |
| Barges/Storage | Barge | TSB Large           | MSRC Richmond | 2 Hr.     | 2          | 3000       | None |
| Barges/Storage | Barge | Shuttle Barge Syste | MSRC Richmond | 2 Hr.     | 1          | 1500       | None |

| Equipment Type | Type | Make/Model        | Location      | Length | Horsepower | Crew | Draft | Fuel   | Cargo     | Disp Tim | # of Units |
|----------------|------|-------------------|---------------|--------|------------|------|-------|--------|-----------|----------|------------|
| Boats          | OSRV | Pacific Responder | MSRC Richmond | 200'   | 900        | 10   | 10    | Diesel | 4000 bbls | 2 Hr.    | 1          |

| Equipment Type | Service | Type    | Make/Model      | Location      | Sections   | Length | Length | Connector | Flotation | Skirt | Transportation    | Disp Time |
|----------------|---------|---------|-----------------|---------------|------------|--------|--------|-----------|-----------|-------|-------------------|-----------|
| Boom           | Ocean   | Infl    | Sea Sentry II   | MSRC Richmond | 6/110'     | 5280'  | N/A    | c         | 23"       | 44"   | Trailer/OSRV Pal. | 2 Hr.     |
| Boom           | River   | Infl    | Texaboom        | MSRC Richmond | 50'        | 6000'  | N/A    | a         | 22"       | Total | Trailer           | 2 Hr.     |
| Boom           | River   | Foam    | Slick Bar       | MSRC Richmond | 2'/100'    | 6000'  | N/A    | a         | 24"       | Total | Trailer           | 2 Hr.     |
| Boom           | Ocean   | Infl    | NOR Oil Trawler | MSRC Richmond | Continuous | 675'   | N/A    | N/A       | 5'        | Total | OSRV              | 2 Hr.     |
| Boom           | Inland  | Curtain | Sea Sentry II   | MSRC Eureka   | 5'/80'     | 2640'  | N/A    | d         | 20"       | 47"   | Voss/Truck        | 2 Hr.     |
| Boom           | River   | Infl    | Texaboom        | MSRC Eureka   | 5'/100'    | 2000'  | N/A    | a         | 10"       | 12"   | Voss/Truck        | 2 Hr.     |
| Boom           | Inland  | Fence   | Slick Bar       | MSRC Eureka   | 5'/100'    | 2000'  | N/A    | a         | 8"        | 16"   | Voss/Truck        | 2 Hr.     |

| Equipment Type       | Service | Type        | Make/Model | Location      | Disp Time | # of Units | Power Sour | Fitting Siz | GPM    |
|----------------------|---------|-------------|------------|---------------|-----------|------------|------------|-------------|--------|
| Cargo Transfer Pumps |         | Screw       | BOP 250    | MSRC Eureka   | 2 Hr.     | 5          | Hydraulic  | 6"          | 441    |
| Cargo Transfer Pumps |         | Screw       | DOP 250    | MSRC Richmond | 2 Hr.     | 4          | Hydraulic  | 6"          | 630 EA |
| Cargo Transfer Pumps |         | Centrifugal | CCN 150    | MSRC Richmond | 2 Hr.     | 1          | Hydraulic  | 6"          | 3000   |

| Equipment Type | Type     | Make/Model | Location      | Disp Time | # of Units | Info |
|----------------|----------|------------|---------------|-----------|------------|------|
| Comms          | Handheld | ICON       | MSRC Richmond | 2 Hr.     | 1/Person   | None |

| Equipment Type        | Type      | Make/Model | Location      | Disp Time | # of Units | Info | Rated Amps |
|-----------------------|-----------|------------|---------------|-----------|------------|------|------------|
| Electrical Generators | Generator | GM         | MSRC Richmond | 2 Hr.     | 2          | None | 6          |

| Equipment Type               | Type | Make/Model  | Location      | Disp Time | # of Units | Info     |
|------------------------------|------|-------------|---------------|-----------|------------|----------|
| Mobile Command Post On Water |      | Custom Made | MSRC Richmond | 2 Hr.     | 1          | Portable |
| Mobile Command Post Pierside |      | Custom Made | MSRC Richmond | N/A       | 1          | Staged   |

| Equipment Type | Type        | Location      | Disp Time | # of Units | Power Sourc | Fitting Size | GPM |
|----------------|-------------|---------------|-----------|------------|-------------|--------------|-----|
| Portable Pumps | Centrifugal | MSRC Richmond | 2 Hr.     | 3          | Diesel      | 2"           | 130 |

| Equipment Type | Type | Make/Model | Location | Disp Time | # of Units | Recovery | Storage Cap |
|----------------|------|------------|----------|-----------|------------|----------|-------------|
|----------------|------|------------|----------|-----------|------------|----------|-------------|

|                       |             |                   |                 |               |                  |                   |             |
|-----------------------|-------------|-------------------|-----------------|---------------|------------------|-------------------|-------------|
| Skimmers              | Drum        | WP-1              | MSRC Eureka     | 2 Hr.         | 1                | 2100              | N/A         |
| Skimmers              | Weir        | Aardvac           | MSRC Eureka     | 2 Hr.         | 1                | 3800              | N/A         |
| Skimmers              | Weir        | Desmi Ocean       | MSRC Richmond   | 2 Hr.         | 1                | 3000              | N/A         |
| Skimmers              | Weir        | Traansrec 350     | MSRC Richmond   | 2 Hr.         | 1                | 10600             | N/A         |
| Skimmers              | Weir        | GT 185            | MSRC Richmond   | 2 Hr.         | 1                | 1300              | N/A         |
| <b>Equipment Type</b> | <b>Type</b> | <b>Make/Model</b> | <b>Location</b> | <b>Length</b> | <b>Disp Time</b> | <b># of Units</b> | <b>Info</b> |
| Sorbents              | Boom        | 3M                | MSRC Richmond   | 2000'         | 2 Hr.            | 1                 | None        |

**Marcor Environmental Services**

|                       |             |                    |                 |                     |                  |                  |                  |
|-----------------------|-------------|--------------------|-----------------|---------------------|------------------|------------------|------------------|
| <b>Equipment Type</b> | <b>Type</b> | <b>Make/Model</b>  | <b>Location</b> | <b>Dispatch Tim</b> | <b># of Unit</b> | <b>Info</b>      | <b>Frequency</b> |
| Comms                 | Handheld FM | Motorola Radius 10 | Hayward         | 2 Hr.               | 4                | With Chargers    | 2 Channel        |
| Comms                 | Cell Phones | Unknown            | Hayward         | 2 Hr.               | 4                | Battery Operated | Several          |

|                       |             |                   |                 |                     |                  |             |                   |                   |
|-----------------------|-------------|-------------------|-----------------|---------------------|------------------|-------------|-------------------|-------------------|
| <b>Equipment Type</b> | <b>Type</b> | <b>Make/Model</b> | <b>Location</b> | <b>Dispatch Tim</b> | <b># of Unit</b> | <b>Info</b> | <b>Power Sour</b> | <b>Rated Amps</b> |
| Electrical Generator  | Generator   | Kubota            | Hayward         | 4 Hr.               | 1                | None        | Gas               | 5                 |
| Electrical Generator  | Lights      | Halogen           | Hayward         | 4 Hr.               | 10               | Pole Mount  | Electricity       | 100V              |

|                       |             |                    |                 |                     |                  |                         |             |
|-----------------------|-------------|--------------------|-----------------|---------------------|------------------|-------------------------|-------------|
| <b>Equipment Type</b> | <b>Type</b> | <b>Make/Model</b>  | <b>Location</b> | <b>Dispatch Tim</b> | <b># of Unit</b> | <b>Storage Cap.(bbl</b> | <b>Info</b> |
| Vacuum Trucks         | Vac Loader  | Guzzler "Reach" Un | Hayward         | 4 Hr.               | 1                | 500                     | None        |

**Laidlaw Environmental**

|                       |             |                     |                 |                     |                  |                         |             |
|-----------------------|-------------|---------------------|-----------------|---------------------|------------------|-------------------------|-------------|
| <b>Equipment Type</b> | <b>Type</b> | <b>Make/Model</b>   | <b>Location</b> | <b>Dispatch Tim</b> | <b># of Unit</b> | <b>Storage Cap.(bbl</b> | <b>Info</b> |
| Vacuum Trucks         | Trailer     | Rubber Lined        | Martinez        | 1 Hr.               | 2                | 5200 Each               | None        |
| Vacuum Trucks         | Trailer     | Petro Stainless Ste | Martinez        | 1 Hr.               | 3                | 5200 Each               | None        |
| Vacuum Trucks         | Trailer     | Petro Stainless Ste | Martinez        | 1 Hr.               | 1                | 1000 Each               | None        |

F - 42 - SEB

Huntway Refining Facility

| Equipment Type | Type  | Make/Model   | Location                 | Length | Horsepow | Crew | Draft | Fuel | Cargo cap/ | Disp Time | # of Units |
|----------------|-------|--------------|--------------------------|--------|----------|------|-------|------|------------|-----------|------------|
| Boats          | Skiff | Valco        | Huntway - Benicia Termin | 16'    | 80       | 2    | 2     | Gas  | N/A        | 1 Hr.     | 1          |
| Boats          | Boat  | Boston Whale | Benicia Marina           | 25'    | 100      | 2    | 2     | Gas  | N/A        | 1 Hr.     | 1          |

| Equipment Type | Servic | Type | Make/Model      | Location                 | Sections | Length | Length | Conn | Flotation | Skirt | Transportatio | Disp Time |
|----------------|--------|------|-----------------|--------------------------|----------|--------|--------|------|-----------|-------|---------------|-----------|
| Boom           | River  | Foam | Petro Container | Huntway - Benicia Termin | 6'/100'  | 800'   | 800'   | b    | 5"        | 13"   | Portable      | 4 Hr.     |
| Boom           | River  | Foam | Optimax II CRS  | Huntway - Benicia Termin | 6'/100'  | 900'   | 900'   | b    | 5"        | 13"   | Portable      | 4 Hr.     |

| Equipment Type | Type  | Make/Model | Location                 | Length | Disp Time | # of Unit | Info |
|----------------|-------|------------|--------------------------|--------|-----------|-----------|------|
| Sorbents       | Boom  | Type 270   | Huntway - Benicia Termin | N/A    | 1 Hr.     | 12 Bales  | None |
| Sorbents       | Pad   | Type 151   | Huntway - Benicia Termin | N/A    | 1 Hr.     | 20 Bales  | None |
| Sorbents       | Sweep | Type 270   | Huntway - Benicia Termin | N/A    | 1 Hr.     | 20 Bales  | None |

Humboldt Bay Response Org.

| Equipment Type | Make/Model | Location               | Disp Time | # of Units | Storage Ca | Info |
|----------------|------------|------------------------|-----------|------------|------------|------|
| Barges/Storage | Kepner     | Bayside Facility       | 1 Hr.     | 1          | 24         | None |
| Barges/Storage | Tank       | Eureka Bayside Facilit | N/A       | 1          | 112        | None |
| Barges/Storage | Tank       | Eureka Bayside Facilit | 1 Hr.     | 10         | 95         | None |
| Barges/Storage | Tank       | Eureka Bayside Facilit | 1 Hr.     | 1          | 24         | None |

| Equipment Type | Make/Model        | Location               | Length | Horsepower | Crew | Draft | Fuel | Disp Time | # of Units |
|----------------|-------------------|------------------------|--------|------------|------|-------|------|-----------|------------|
| Boats          | Aluminum Work Boa | Eureka Bayside Facilit | 26'    | 305        | 3    | 3     | Gas  | 1/2 Hr.   | 1          |
| Boats          | Aluminum Work Boa | Eureka Bayside Facilit | 16'    | 9.5        | 2    | 3     | Gas  | 1/2 Hr.   | 1          |
| Boats          | Wood Work Boat    | Eureka Bayside Facilit | 16'    | 50         | 2    | 3     | Gas  | 1/2 Hr.   | 1          |
| Boats          | Aluminum Work Boa | Eureka Bayside Facilit | 12'    | 10         | 2    | 1     | Gas  | 1/2 Hr.   | 1          |
| Boats          | Glastrow          | Eureka Bayside Facilit | 16'    | 150        | 2    | 3     | Gas  | 1/2 Hr.   | 1          |

| Equipment Type | Service | Type | Make/Model        | Location        | Sections   | Length | Length | Connector | Flotation | Skirt | Transpo    | Disp Time |
|----------------|---------|------|-------------------|-----------------|------------|--------|--------|-----------|-----------|-------|------------|-----------|
| Boom           | Inland  | Foam | Kepner Sea Curtai | Eureka Facility | 100'       | 2400'  | N/A    | d         | 20"       | 23"   | Vessel     | 2 Hr.     |
| Boom           | River   | Infl | Vikoma Sea Pak    | Eureka Facility | Continuous | 1600'  | N/A    | N/A       | 20"       | 23"   | Vessel     | 2 Hr.     |
| Boom           | Inland  | Foam | Kepner Sea Curtai | LM Renner       | 100'       | 1600'  | N/A    | d         | 20"       | 23"   | Palletized | 2 Hr.     |
| Boom           | Inland  | Foam | Kepner Sea Curtai | PG&E            | 100'       | 1300'  | 1300'  | d         | 1"        | 15"   | Palletized | 2 Hr.     |
| Boom           | Inland  | Foam | Kepner Sea Curtai | Chevron         | 100'       | 1100'  | 1100'  | d         | 16"       | 42"   | Vessel     | 2 Hr.     |
| Boom           | Inland  | Foam | Kepner Sea Curtai | Unocal          | 100'       | 1000'  | 1000'  | d         | 16"       | 42"   | Vessel     | 2 Hr.     |
| Boom           | Inland  | Foam | Kepner Sea Curtai | Unocal          | 100'       | 600'   | 600'   | d         | 16"       | 42"   | Vessel     | 2 Hr.     |

F - 44 - STEB

| Equipment Type       | Type      | Make/Model | Location        | Disp Time | # of Units | Info   | Power Sour | GPM | Rated Amps |
|----------------------|-----------|------------|-----------------|-----------|------------|--------|------------|-----|------------|
| Electrical Generator | Generator | Homelite   | Eureka Facility | 1 Hr.     | 1          | None   | Diesel     | 5   | 5          |
| Electrical Generator | Generator | Homelite   | Eureka Facility | 1 Hr.     | 1          | None   | Diesel     | 1.5 | 1.5        |
| Electrical Generator | Generator | Kohler     | Eureka Facility | 1 Hr.     | 1          | Welder | Diesel     | 3.4 | 3.4        |
| Electrical Generator | Generator | Miller     | Eureka Facility | 1 Hr.     | 1          | None   | Diesel     | 2   | 2          |

| Equipment Type | Type        | Make/Model | Location        | Disp Time | # of Units | Info | Frequency | Power Sourc | Fitting Size | GPM |
|----------------|-------------|------------|-----------------|-----------|------------|------|-----------|-------------|--------------|-----|
| Portable Pumps | Centrifugal | Wilden     | Eureka Facility | 1 Hr.     | 2          |      |           | Hydraulic   | 2"           | 104 |
| Portable Pumps | Centrifugal | Homelite   | Eureka Facility | 1 Hr.     | 1          |      |           | Gas         | 2"           | 140 |
| Portable Pumps | Submersible | Unknown    | Eureka Facility | 1 Hr.     | 1          |      |           | Electric    | 3"           | 200 |
| Portable Pumps | Radio       | Homelite   | Eureka Office   | 15 Min.   | 4          | None | Several   |             |              |     |
| Portable Pumps | Radio       | Homelite   | Eureka Office   | 15 Min.   | 1          | None | N/A       |             |              |     |
| Portable Pumps | Radio       | Homelite   | Eureka Office   | N/A       | 1          | None | Several   |             |              |     |

| Equipment Type | Type   | Make/Model     | Location        | Disp Time | # of Units | Recovery | Storage Cap |
|----------------|--------|----------------|-----------------|-----------|------------|----------|-------------|
| Skimmers       | Weir   | Lockheed       | Eureka Facility | 1/2 Hr.   | 1          | 288      | 1000        |
| Skimmers       | Weir   | SAS            | Eureka Facility | 1/2 Hr.   | 1          | 206      | N/A         |
| Skimmers       | Disc   | VIK KOM MK II  | Eureka Facility | 1/2 Hr.   | 1          | 521      | N/A         |
| Skimmers       | Weir   | OSO Cyclone    | Eureka Facility | 1/2 Hr.   | 1          | 891      | N/A         |
| Skimmers       | Wier   | Mark II        | Eureka Facility | 1/2 Hr.   | 1          | 411      | N/A         |
| Skimmers       | Weir   | Acme 51T       | Eureka Facility | 1/2 Hr.   | 1          | 4731     | N/A         |
| Skimmers       | Disc   | Vikoma Sea Pak | Eureka Facility | 1/2 Hr.   | 1          | 306      | N/A         |
| Skimmers       | Weir   | Acme MK 39T    | Eureka Facility | 1/2 Hr.   | 1          | 321      | N/A         |
| Skimmers       | Vacuum | Kepner Sea Vac | Eureka Facility | 1/2 Hr.   | 1          | 118      | N/A         |

| Equipment Type | Type  | Make/Model            | Location        | Disp Time | # of Units |
|----------------|-------|-----------------------|-----------------|-----------|------------|
| Sorbents       | Boom  | 3M Type 270, Sorb Oil | Eureka Facility | 1/2 Hr.   | 2 Boxes    |
| Sorbents       | Pads  |                       | Eureka Facility | 1/2 Hr.   | 322 Boxes  |
| Sorbents       | Pads  |                       | Eureka Facility | 1/2 Hr.   | 3 Boxes    |
| Sorbents       | Pads  |                       | Eureka Facility | 1/2 Hr.   | 24 Rolls   |
| Sorbents       | Chips |                       | Eureka Facility | 1/2 Hr.   | 3 Boxes    |

**H&H Environmental Service**

| Equipment Type        | Type        | Make/Model       | Location                | Dispatch Tim  | # of Units   | Storage Cap | Info         |            |            |               |               |
|-----------------------|-------------|------------------|-------------------------|---------------|--------------|-------------|--------------|------------|------------|---------------|---------------|
| Barges/Storage        | Tank        | Portable         | San Francisco Shore/Bar | 2 Hr.         | 1            | 120         | None         |            |            |               |               |
| Barges/Storage        | Tank        | Portable         | San Francisco Shore/Bar | 2 Hr.         | 1            | 160         | None         |            |            |               |               |
| Barges/Storage        | Tank        | Portable         | San Francisco Shore/Bar | 2 Hr.         | 1            | 286         | None         |            |            |               |               |
| Equipment Type        | Type        | Make/Model       | Location                | Length        | Horsepower   | Crew        | Draft        | Fuel       | Cargo cap/ | Dispatch Tim  | # of Units    |
| Boats                 | Boat        | Boston Whaler    | San Francisco           | 21'           | 125          | 2           | 1            | Gas        | 1000 lbs   | 2 Hr.         | 1             |
| Boats                 | Boat        | Larson           | San Francisco           | 16'           | 75           | 2           | 1            | Gas        | 700 lbs    | 2 Hr.         | 1             |
| Boats                 | Boat        | Work Boat        | San Francisco           | 14'           | 15           | 2           | 1            | Gas        | 500 lbs    | 2 Hr.         | 1             |
| Equipment Type        | Service     | Type             | Make/Model              | Location      | Sections     | Length      | Connector    | Flotation  | Skirt      | Transportatio | Dispatch Time |
| Boom                  | Inland      | Curtain          | Containment System      | San Francisco | 8"/50"       | 3600'       | a            | 6"         | 18"        | Trailer       | 2 Hr.         |
| Equipment Type        | Service     | Type             | Location                | Dispatch Tim  | # of Units   | Info        | Power Sour   | Rated Amps |            |               |               |
| Electrical Generators |             | Generator        | San Francisco           | 2 Hr.         | 1            | None        | Diesel       | 3          |            |               |               |
| Electrical Generators |             | Generator        | San Francisco           | 2 Hr.         | 1            | None        | Diesel       | 5          |            |               |               |
| Electrical Generators |             | Lights           | San Francisco           | 2 Hr.         | 21           | None        | Electric     | N/A        |            |               |               |
| Equipment Type        | Type        | Make/Model       | Location                | Dispatch Tim  | # of Units   | Power Sour  | Fitting Size | GPM        |            |               |               |
| Portable Pumps        | Diaphram    |                  | San Francisco           | 2 Hr.         | 10           | Air         | 2"           | 80         |            |               |               |
| Portable Pumps        | Diaphram    |                  | San Francisco           | 2 Hr.         | 5            | Air         | 3"           | 60         |            |               |               |
| Portable Pumps        | Centrifugal | Floating         | San Francisco           | 2 Hr.         | 2            | Hydraulic   | 2"           | 60         |            |               |               |
| Portable Pumps        | Diaphram    | Sludge           | San Francisco           | 2 Hr.         | 5            | Air         | 2"           | 60         |            |               |               |
| Portable Pumps        | Various     | Various          | San Francisco           | 2 Hr.         | 7            | Various     | 2"           | 60         |            |               |               |
| Equipment Type        | Type        | Make/Model       | Location                | Dispatch Tim  | # of Units   | Recovery    | Storage Cap  |            |            |               |               |
| Skimmers              | Weir        | Douglas Skim Pak | San Francisco           | 2 Hr.         | 1            | 300         | None         |            |            |               |               |
| Equipment Type        | Type        | Make/Model       | Location                | Length        | Dispatch Tim | # of Units  | Info         |            |            |               |               |
| Sorbents              | Pads        | Ergon E-50       | San Francisco           | N/A           | 2 Hr.        | 2 Bales     | None         |            |            |               |               |
| Sorbents              | Pads        | Ergon E-100      | San Francisco           | N/A           | 2 Hr.        | 115 Bales   | None         |            |            |               |               |
| Sorbents              | Pads        | Ergon E-200      | San Francisco           | N/A           | 2 Hr.        | 14 Bales    | None         |            |            |               |               |

|          |         |                |               |         |       |          |      |
|----------|---------|----------------|---------------|---------|-------|----------|------|
| Sorbents | Pillows | Ergon E-10P    | San Francisco | N/A     | 2 Hr. | 13 Bales | None |
| Sorbents | Sweeps  | Ergon E-1800   | San Francisco | N/A     | 2 Hr. | 16 Bags  | None |
| Sorbents | Coil    | Ergon Cobra    | San Francisco | N/A     | 2 Hr. | 3 Boxes  | None |
| Sorbents | Boom    | Ergon E-810    | San Francisco | 10'     | 2 Hr. | 17 Boxes | None |
| Sorbents | Boom    | Ergon Ultrasor | San Francisco | Various | 2 Hr. | Various  | None |

| Equipment Type | Type         | Make/Model | Location      | Dispatch Tim | # of Units | Storage Cap | Info |
|----------------|--------------|------------|---------------|--------------|------------|-------------|------|
| Vacuum Trucks  | Semi Trailer | Various    | San Francisco | 2 Hr.        | 12         | 125         | None |
| Vacuum Trucks  | Truck        | GMC        | San Francisco | 2 Hr.        | 1          | 50          | None |

**Gulf of Farallones Marine Sanctuary**

| Equipment Typ | Type   | Make/Model   | Location     | Length | Horsepow | Crew | Draft | Fuel | Dispatch Tim | # of Units |
|---------------|--------|--------------|--------------|--------|----------|------|-------|------|--------------|------------|
| Boats         | Vessel | Boston Whale | Bodega Harbo | 27'    | 300      | 3    | 2     | Gas  | 2 Hr.        | 1          |

**San Ramon Valley FPD**

| Equipment Typ | Type | Make/Mod | Location        | Length   | Dispatch Tim | # of Unit | Info |
|---------------|------|----------|-----------------|----------|--------------|-----------|------|
| Sorbents      | Boom | Sorbent  | San Ramon Valle | 8" x 10" | 2 Hr.        | 4         | None |
| Sorbents      | Bags | Sorbent  | San Ramon Valle | 4 lbs    | 2 Hr.        | 20        | None |

**Sausalito Fire Department**

| Equipment Typ | Type | Make/Mod  | Location  | Length | Horsepow | Crew | Draft | Fuel | Dispatch Tim | # of Units |
|---------------|------|-----------|-----------|--------|----------|------|-------|------|--------------|------------|
| Boats         | Boat | Fire Boat | Sausalito | 24'    | 250      | 3    | 3     | Gas  | 2 Hr.        | 1          |
| Boats         | Boat | TRB       | Sausalito | 16'    | 20       | 2    | 2     | Gas  | 2 Hr.        | 1          |
| Boats         | Boat | Air Boat  | Sausalito | 20'    | 30       | 2    | 2     | Gas  | 2 Hr.        | 1          |

Sausalito Towing/Parker Diving

| Equipment Type        | Type            | Make/Model          | Location              | Length    | Horsepow   | Crew       | Draft        | Fuel         | Cargo     | Disp Tim | # of Units    |           |
|-----------------------|-----------------|---------------------|-----------------------|-----------|------------|------------|--------------|--------------|-----------|----------|---------------|-----------|
| Boats                 | Sail            | Ciabo               | Sausalito             | 25'       | 250        | 2          | 2            | Gas          | 1 Ton     | 4 Hr.    | 1             |           |
| Boats                 | RHI             | Zodiac              | Sausalito             | 14'       | 15         | 2          | 15           | Gas          | 800 lbs   | 4 Hr.    | 1             |           |
| Boats                 | Infl            | West Marine         | Sausalito             | 11'       | 15         | 42         | 8            | Gas          | 800 lbs   | 4 Hr.    | 1             |           |
| Equipment Type        | Service         | Type                | Make/Model            | Location  | Sections   | Length     | Length       | Connector    | Flotation | Skirt    | Transportatio | Disp Time |
| Boom                  | Inland          | Curtain             | Containment Syste     | Sausalito | 6'/50'     | 600'       | N/A          | b            | 8"        | 12"      | Trailer       | 1 Hr.     |
| Equipment Type        | Service         | Type                | Make/Model            | Location  | Disp Time  | # of Units | Power Sour   | Fitting Size | GPM       |          |               |           |
| Cargo Transfer Pumps  |                 | Submersible         | GE                    | Sausalito | 1 Hr.      | 1          | Electric     | 3"           | 50        |          |               |           |
| Cargo Transfer Pumps  |                 | Submersible         | FLOTBC/Geyer          | Sausalito | 1 Hr.      | 5          | Electric     | 3"           | 70        |          |               |           |
| Equipment Type        | Type            | Make/Model          | Location              | Disp Tim  | # of Units | Info       | Frequency    |              |           |          |               |           |
| Comms                 | VHF Portable    | Omega               | Sausalito             | 3 Hr.     | 4          | None       | Various      |              |           |          |               |           |
| Comms                 | VHF Base Statio | Horizon-Titan       | Sausalito             | N/A       | 1          | None       | Various      |              |           |          |               |           |
| Comms                 | VHF Mobile      | Horizo-Titan/Polari | Sausalito, In vehicle | 3 Hr.     | 3          | None       | Various      |              |           |          |               |           |
| Comms                 | Underwater      | Aqua-com            | Sausalito             | N/A       | 1          | None       | Various      |              |           |          |               |           |
| Equipment Type        | Type            | Make/Model          | Location              | Disp Tim  | # of Units | Info       | Power Sour   | Rated Amps   |           |          |               |           |
| Electrical Generators | Generator       | GE                  | Sausalito             | 2 Hr.     | 1          | None       | Diesel       | 2.5          |           |          |               |           |
| Electrical Generators | Generator       | GE                  | Sausalito             | 2 Hr.     | 2          | None       | Diesel       | 5            |           |          |               |           |
| Electrical Generators | Underwater Vid  | Sony                | Sausalito             | 2 Hr.     | 1          | None       | Battery      | N/A          |           |          |               |           |
| Equipment Type        | Type            | Make/Model          | Location              | Disp Tim  | # of Units | Power Sour | Fitting Size | GPM          |           |          |               |           |
| Portable Pumps        | Centrifugal     | Pacer               | Sausalito             | 1 Hr.     | 2          | Air        | 3"           | 90           |           |          |               |           |
| Portable Pumps        | Centrifugal     | Homelite            | Sausalito             | 1 Hr.     | 2          | Hydraulic  | 3"           | 125          |           |          |               |           |
| Equipment Type        | Type            | Make/Model          | Location              | Length    | Disp Time  | # of Units | Info         |              |           |          |               |           |
| Sorbents              | Pads            | HP 420              | Sausalito             | 2' x 2'   | 1 Hr.      | 4          | None         |              |           |          |               |           |
| Sorbents              | Boom            | HP 420 Petroboom    | Sausalito             | 160'      | 1 Hr.      | 4          | None         |              |           |          |               |           |

Seariver Maritime Inc.

| Equipment Type | Servic | Type | Make/Model       | Location          | Section | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|----------------|--------|------|------------------|-------------------|---------|--------|----------|-----------|-------|---------------|---------------|
| Boom           | River  | Infl | Kepner Open Harb | Seariver Carquine | 500'    | 4000'  | b        | 12"       | 18"   | Vessel        | 1/2 Hr.       |

Shell Oil Martinez

| Equipment Type | Service | Type | Make/Mod | Location           | Sections | Length | Length | Connecto | Flotation | Skirt | Transportation |
|----------------|---------|------|----------|--------------------|----------|--------|--------|----------|-----------|-------|----------------|
| Boom           | River   | Foam | PSI      | Each Berth has 100 | 5'/100'  | 7000'  | 2000'  | f        | 8"        | 18"   | Facility       |

| Equipment Type     | Type       | Make/Mod | Location      | Dispatch Time | # of Unit | Info |
|--------------------|------------|----------|---------------|---------------|-----------|------|
| Mobile Command Pos | Motor Home | GMC      | Auxiliary Fir | 2 Hr.         | 1         | None |

Suisan Bay Reserve Fleet

| Equipment Type | Servic | Type    | Make/Model      | Location           | Section  | Length | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|----------------|--------|---------|-----------------|--------------------|----------|--------|--------|----------|-----------|-------|---------------|---------------|
| Boom           | Rver   | Curtain | Slickbar Mark 1 | Reserve Fleet Offi | 10'/100' | 1000'  | 1000'  | a        | N/A       | N/A   | Barge         | 1 1/2 Hr.     |

F-48-SFB



Texaco Oil Terminal

| Equipment Type | Type  | Make/Model     | Location                       | Sections | Length | Horsepow | Crew | Draft | Fuel | Cargo   | Disp Time |
|----------------|-------|----------------|--------------------------------|----------|--------|----------|------|-------|------|---------|-----------|
| Boats          | Boat  | Slickbar Spill | Texaco Richmond Terminal Wharf |          | 15'    | 15       | 2    | 2     | Gas  | Unknown | 1 Hr.     |
| Boats          | Skiff | Unknown        | Texaco - Richmond Terminal     |          | 15'    | 15       | 2    | 2     | Gas  | Unknown | 1 Hr.     |

| Equipment Type | Servic | Type | Make/Model            | Location         | Sections | Length | Length | Conn | Flotation | Skirt | Transportation        | Disp Time |
|----------------|--------|------|-----------------------|------------------|----------|--------|--------|------|-----------|-------|-----------------------|-----------|
| Boom           | River  | Foam | American B&B Slickbar | Texaco - Richmon | 6'/100'  | 200'   | N/A    | b    | 6"        | 18"   | Trailer               | 2 Hr.     |
| Boom           | River  | Foam | American B&B Slickbar | Texaco - Richmon | 6'/100'  | 1000'  | N/A    | b    | 6"        | 18"   | On Spill Boat         | 1 Hr.     |
| Boom           | River  | Foam | American B&B Slickbar | Texaco - Richmon | N/A      | 500'   | 500'   | b    | 6"        | 18"   | Permanent Installatio | 1/2 Hr.   |

| Equipment Type       | Type   | Make/Model | Location          | Disp Time | # of Unit | Info | Power Source |
|----------------------|--------|------------|-------------------|-----------|-----------|------|--------------|
| Electrical Generator | Blower | M6         | Texaco - Richmond | 2 Hr.     | 1         | None | Gas          |

| Equipment Type | Type | Make/Model    | Location                   | Disp Time | # of Unit | Recovery | Storage Cap |
|----------------|------|---------------|----------------------------|-----------|-----------|----------|-------------|
| Skimmers       | Weir | 1/2" Manta Ba | Texaco - Richmond Terminal | 2 Hr.     | 2         | 500      | None        |

| Equipment Type | Type | Make/Model | Location              | Length | Disp Tim | # of Units | Info          |
|----------------|------|------------|-----------------------|--------|----------|------------|---------------|
| Sorbents       | Pad  | Abasco     | Texaco Richmond Plant | N/A    | 2 Hr.    | 4 Bundles  | 12 Per Bundle |
| Sorbents       | Boom | Abasco     | Texaco Richmond Plant | 160'   | 2 Hr.    | 4 Bundles  | 4 Per Bundle  |

Time Oil Company

| Equipment Typ | Type  | Make/Mod  | Location                 | Length | Horsepow | Crew | Draft | Fuel | Cargo cap/ | Dispatch Tim | # of Units |
|---------------|-------|-----------|--------------------------|--------|----------|------|-------|------|------------|--------------|------------|
| Boats         | Boat  | Response  | Time Oil Wharf - Richmon | 16'    | 88       | 2    | 2     | Gas  | Unknown    | 1/2 Hr.      | 1          |
| Boats         | Skiff | John Boat | Time Oil Wharf - Richmon | 14'    | 15       | 2    | 1     | Gas  | 600 lbs    | 1/2 Hr.      | 1          |

| Equipment Typ | Service | Type    | Make/Model         | Location            | Sections | Length | Length | Conn | Flotation | Skirt | Transportatio | Dispatch Time |
|---------------|---------|---------|--------------------|---------------------|----------|--------|--------|------|-----------|-------|---------------|---------------|
| Boom          | Inland  | Curtain | Kepner Sea Curtain | Time Oil - Richmond | 8'/100'  | 1100'  | 1100'  | a    | 8"        | 10"   | Flatbed Truck | 1 Hr.         |
| Boom          | Inland  | Fence   | Unknown            | Time Oil - Richmond | 10'/50'  | 300'   | 300'   | c    | 12"       | 12"   | In Water      | N/A           |

| Equipment Typ | Type        | Make/Mod  | Location            | Dispatch Time | # of Units | Info | Frequency |
|---------------|-------------|-----------|---------------------|---------------|------------|------|-----------|
| Comms         | Radio       | Portables | Time Oil - Richmond | 15 Min.       | 2          | None | Several   |
| Comms         | Base Statio | Unknown   | Time Oil - Richmond | N/A           | 1          | None | Several   |
| Comms         | Base Statio | Marine    | Time Oil - Richmond | N/A           | 1          | None | Several   |

| Equipment Typ | Type     | Make/Mod  | Location            | Length     | Dispatch Ti | # of Units | Info |
|---------------|----------|-----------|---------------------|------------|-------------|------------|------|
| Sorbents      | Pad      | 3M        | Time Oil - Richmond | 18" X 18"  | 1 Hr.       | 20 Bales   | None |
| Sorbents      | Sweep    | 3M        | Time Oil - Richmond | 100'       | 1 Hr.       | 3 Packs    | None |
| Sorbents      | Share    | Pom Pom   | Time Oil - Richmond | N/A        | 1 Hr.       | 3 Packs    | None |
| Sorbents      | Granules | Spedi-Dri | Time Oil - Richmond | 50 lb bags | 1 Hr.       | 12 Bags    | None |
| Sorbents      | Pad      | 3M        | Time Oil - Richmond | 18" X 18"  | 1 Hr.       | 5 Bales    | None |

Tosco Avon Company

| Equipment Type | Type | Make/Model   | Location                | Length | Hrspwr | Crew | Draft | Fuel | Cargo | Disp Tim | # of Units |
|----------------|------|--------------|-------------------------|--------|--------|------|-------|------|-------|----------|------------|
| Boats          | Boat | Munson       | Tosco - Martinez Marina | 30'    | 200    | 4    | 5     | Gas  | N/A   | 1 Hr.    | 1          |
| Boats          | Boat | Boston Whale | Martinez Marina         | 22'    | 175    | 3    | 3     | Gas  | N/A   | 1 Hr.    | 2          |
| Boats          | Boat | Newport      | Tosco - Avon Wharf      | 17'    | 5      | 3    | 2     | Gas  | N/A   | 1 Hr.    | 1          |

| Equipment Type | Service | Type | Make/Model   | Location           | Sections | Length | Length | Conn | Flotation | Skirt | Transportatio | Disp Time |
|----------------|---------|------|--------------|--------------------|----------|--------|--------|------|-----------|-------|---------------|-----------|
| Boom           | Inland  | Foam | American B&B | AORT - Avon Refine | 6'/100'  | 150'   | N/A    | b    | 5"        | 32"   | Pallets       | 2 Hr.     |
| Boom           | Inland  | Foam | American B&B | Amorco Wharf       | 6'/100'  | 2200'  | 2200'  | b    | 8"        | 32"   | On Wharf      | 1 Hr.     |
| Boom           | Inland  | Foam | American B&B | Amorco Wharf       | 6'/100'  | 2200'  | 2200'  | b    | 5"        | 32"   | On Wharf      | 1 Hr.     |
| Boom           | Inland  | Foam | American B&B | AORT - Avon Refine | 6/50'    | 1000'  | N/A    | b    | 4"        | 13"   | Pallets       | 2 Hr.     |

| Equipment Type | Type      | Make/Model    | Location                     | Disp Time | # of Unit | Info | Frequency |
|----------------|-----------|---------------|------------------------------|-----------|-----------|------|-----------|
| Comms          | Radio     | Hand Portable | AORT Storehouse - Avon Refin | 15 Min.   | 19        | None | Several   |
| Comms          | Fax       | Unknown       | AORT Storehouse - Avon Refin | N/A       | 1         | None | N/A       |
| Comms          | Telephone | Cellular      | AORT Storehouse - Avon Refin | N/A       | 4         | None | N/A       |

F-50-SFB

| Equipment Type       | Type      | Make/Model | Location          | Disp Time | # of Unit | Info | Pwr Src | Amps |
|----------------------|-----------|------------|-------------------|-----------|-----------|------|---------|------|
| Electrical Generator | Generator | Craftsman  | Tosco - Boathouse | 2 Hr.     | 1         | None | Gas     | 0.8  |
| Electrical Generator | Generator | Honda      | Tosco - Boathouse | 2 Hr.     | 1         | None | Gas     | 1    |

| Equipment Type | Type  | Make/Model   | Location           | Length | Hrspwr | Crew | Draft | Fuel | Cargo | Disp Tim | # of Units |
|----------------|-------|--------------|--------------------|--------|--------|------|-------|------|-------|----------|------------|
| Skiff          | Skiff | Aluminum Jon | Tosco - Avon Wharf | 14'    | 15     | 2    | 2     | Gas  | N/A   | 2 Hr.    | 10         |

| Equipment Type | Type   | Make/Model | Location                     | Length   | Disp Tim | # of Units | Info        |
|----------------|--------|------------|------------------------------|----------|----------|------------|-------------|
| Sorbents       | Boom   | Type 270   | AORT Storehouse - Avon Refin | 8" X 40' | 1 Hr.    | 160 Bags   | None        |
| Sorbents       | Sheets | Type 151   | AORT Storehouse - Avon Refin | N/A      | 1 Hr.    | 204 Pkgs   | 100 Per Pkg |
| Sorbents       | Sheets | Type 126   | AORT Storehouse - Avon Refin | N/A      | 1 Hr.    | 173 Pkgs   | 100 Per Pkg |
| Sorbents       | Rolls  | Type 100   | AORT Storehouse - Avon Refin | 3000     | 1 Hr.    | None       | None        |
| Sorbents       | Shares | Petrowash  | AORT Storehouse - Avon Refin | N/A      | 1 Hr.    | None       | None        |

| Equipment Type | Type  | Make/Model | Location      | Disp Time | # of Unit | Storage Ca | Info         |
|----------------|-------|------------|---------------|-----------|-----------|------------|--------------|
| Vacuum Trucks  | Truck | Bobtail    | Avon Refinery | 2 Hr.     | 1         | 60         | None         |
| Vacuum Trucks  | Truck | Bobtail    | Avon Refinery | 2 Hr.     | 1         | 100        | With Trailer |

Trinidad Harbor

| Equipment Typ | Type | Make/Mod | Location       | Length    | Dispatch Tim | # of Units |
|---------------|------|----------|----------------|-----------|--------------|------------|
| Sorbents      | Pads | 3M       | Trinidad Harbo | 18" X 18" | 1/2 Hr.      | 50         |

Unocal Eureka Terminal

| Equipment Typ | Type  | Make/Model   | Location               | Length | Horsepow | Crew | Draft | Fuel | Dispatch Tim | # of Units |
|---------------|-------|--------------|------------------------|--------|----------|------|-------|------|--------------|------------|
| Boats         | Skiff | Boston Whale | Unocal Eureka Terminal | 20'    | 150      | 2    | 2     | Gas  | 1/2 Hr.      | 1          |

| Equipment Typ | Type  | Make/Model | Location               | Dispatch Tim | # of Units | Info          | Frequency |
|---------------|-------|------------|------------------------|--------------|------------|---------------|-----------|
| Comms         | Radio | Motorola   | Unocal Eureka Terminal | 5 Min.       | 4          | None          | Several   |
| Comms         | Radio | Motorola   | Unocal Eureka Terminal | 5 Min.       | 1          | On Spill Boat | Several   |

| Equipment Typ | Type | Make/Model | Location                | Dispatch Tim | # of Units | Info                |
|---------------|------|------------|-------------------------|--------------|------------|---------------------|
| Sorbents      | Pads | 3M         | Unocal - Eureka Boathou | 1/2 Hr.      | 2 Bundles  | 100 Per Bundle      |
| Sorbents      | Boom | 3M         | Unocal - Eureka Boathou | 1/2 Hr.      | 3          | 4 Sections Per Unit |

Unocal Oil Terminal

| Equipment Typ | Type   | Make/Mod | Location                  | Length                | Horsepow | Crew   | Draft  | Fuel     | Dispatch Tim | # of Units |
|---------------|--------|----------|---------------------------|-----------------------|----------|--------|--------|----------|--------------|------------|
| Boats         | Boat   | Utility  | Unocal - Richmond Boathou | 16'                   | 120      | 2      | 1      | Gas      | 2 Hr.        | 1          |
| Boats         | Boat   | Utility  | Unocal - Richmond Boathou | 16'                   | 60       | 2      | 1      | Gas      | 2 Hr.        | 1          |
| Equipment Typ | Servic | Type     | Make/Model                | Location              | Sections | Length | Length | Connecto | Flotation    | Skirt      |
| Boom          | Inland | Foam     | Kepner Sea Curtain        | Unocal - Richmond Doc | 100'     | 1000'  | 1000'  | g        | 9"           | 12"        |
| Boom          | Inland | Foam     | Kepner Reel Pak           | Unocal - Richmond Doc | 100'     | 1000'  | 1000'  | g        | 9"           | 12"        |
| Boom          | Inland | Foam     | Kepner Foam Fill          | Unocal - Richmond Doc | 25'      | 700'   | 700'   | g        | 9"           | 12"        |

F - 51 - SEB

Unocal San Francisco Refinery

| Equipment Typ | Service | Type    | Make/Model         | Location        | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio  | Dispatch Time |
|---------------|---------|---------|--------------------|-----------------|----------|--------|--------|----------|-----------|-------|----------------|---------------|
| Boom          | Inland  | Curtain | Kepner Sea Curtain | Unocal Terminal | 100'     | 4500'  | 4500'  | g        | 10"       | 16"   | Fixed Facility | N/A           |
| Boom          | Inland  | Curtain | Containment System | S.E. of Tank 10 | 8'/25'   | 200'   | N/A    | a        | 8"        | 12"   | Truck          | 1 Hr.         |
| Boom          | Inland  | Curtain | Kepner Sea Curtain | S.E. of Tank 10 | 8'/100'  | 2000'  | N/A    | g        | 9"        | 11"   | Plant Trailer  | N/A           |

| Equipment Typ | Type        | Make/Mod    | Location        | Dispatch Tim | # of Units | Info | Frequency |
|---------------|-------------|-------------|-----------------|--------------|------------|------|-----------|
| Comms         | Radio       | Radio Shack | Learning Center | 15 Min.      | 15         | None | Several   |
| Comms         | Cell Phones | Motorola    | Learning Center | 15 Min.      | 6          | None | N/A       |

| Equipment Typ | Type   | Make/Mod  | Location         | Dispatch Tim | # of Units | Recovery | Storage Cap |
|---------------|--------|-----------|------------------|--------------|------------|----------|-------------|
| Skimmers      | Weir   | Unknown   | S.E. of Tank 100 | 1 Hr.        | 1          | Unknown  | Unknown     |
| Skimmers      | Vacuum | Skim Pak  | S.E. of Tank 100 | 1 Hr.        | 1          | Unknown  | Unknown     |
| Skimmers      | Vacuum | Slick Bar | S.E. of Tank 100 | 1 Hr.        | 1          | Unknown  | Unknown     |

| Equipment Typ | Type   | Make/Mod | Location                     | Length | Dispatch Tim | # of Units |
|---------------|--------|----------|------------------------------|--------|--------------|------------|
| Sorbents      | Sweeps | 3M       | Unocal - Rodeo Marine Termin | 100'   | 2 Hr.        | 30 Bales   |
| Sorbents      | Pads   | 3M       | Unocal - Rodeo Marine Termin | N/A    | 2 Hr.        | 50 Bales   |
| Sorbents      | Pads   | 3M       | Unocal - Rodeo Marine Termin | N/A    | 2 Hr.        | 3 Bales    |
| Sorbents      | Sweeps | 3M       | Unocal - Rodeo Marine Termin | N/A    | 2 Hr.        | 30 Bales   |
| Sorbents      | Boom   | 3M       | S.E. of Tank 100             | N/A    | 2 Hr.        | 12 Bales   |
| Sorbents      | Pads   | 3M       | S.E. of Tank 100             | N/A    | 2 Hr.        | 24 Bales   |
| Sorbents      | Rools  | 3M       | S.E. of Tank 100             | N/A    | 2 Hr.        | 60         |

US Army Corps of Engineering

| Equipment Typ | Type | Make/Mode     | Location                 | Length | Crew | Draft | Fuel   | Cargo cap/ | Dispatch Tim | # of Units |
|---------------|------|---------------|--------------------------|--------|------|-------|--------|------------|--------------|------------|
| Boats         | Boat | Derrick Boats | Sausalito - Coyote/Racco | 100'   | 5    | 6     | Diesel | 30 Tons    | 4 Hr.        | 2          |
| Boats         | Tug  | Tugboat       | Sausalito - Grizzly      | 50'    | 2    | 4     | Diesel | 5 Tons     | 4 Hr.        | 1          |

F - 52 - STEB

US FISC Oakland

| Equipment Typ  | Type | Make/Model | Location       | Dispatch Tim | # of Units | Storage Cap | Info |
|----------------|------|------------|----------------|--------------|------------|-------------|------|
| Barges/Storage | Swob | Barge      | Station 1 Pier | 2 Hr.        | 2          | 70000       | None |

| Equipment Typ | Type    | Make/Model    | Location             | Length | Horsepower | Crew | Draft | Fuel | Cargo cap/ | Dispatch Time |
|---------------|---------|---------------|----------------------|--------|------------|------|-------|------|------------|---------------|
| Boats         | Work    | Platform      | Bldg. 132 - On Trail | 33'    | 300        | 2    | 2     | Gas  | Unknown    | 5 Min         |
| Boats         | Utility | Utility Boat  | Bldg. 132 - On Trail | 19'    | 200        | 2    | 2     | Gas  | 2000 lbs   | 20 Min        |
| Boats         | Utility | Boston Whaler | Bldg. 132 - On Trail | 25'    | 300        | 2    | 2     | Gas  | 3025 lbs   | 20 Min        |

| Equipment Typ | Type  | Make/Model | Location          | Sections | Length     | Length | Horsepow | Flotation | Skirt | Transportatio | Dispatch Tim     | # of Units |
|---------------|-------|------------|-------------------|----------|------------|--------|----------|-----------|-------|---------------|------------------|------------|
| Boom          | Ocean | Fence      | Applied Fab Tech  | Bldg. #1 | 100'       | 3600'  | N/A      | d         | 12"   | 24"           | Boxes            | 2 Hr.      |
| Boom          | Ocean | Foam       | Parker            | Bldg. #1 | 6'/50'     | 550'   | N/A      | a         | 8"    | 22"           | Boxes            | 2 Hr.      |
| Boom          | Ocean | Foam       | Slickbar Class II | Bldg. #1 | 4'/50'     | 500'   | N/A      | d         | 14"   | 22"           | On Floor/Trailer | 2 Hr.      |
| Boom          | Ocean | Fence      | Slickbar Class I  | Bldg. #1 | Continuous | 900'   | N/A      | d         | N/A   | N/A           | Boxes            | 2 Hr.      |

| Equipment Typ | Type        | Make/Model | Location              | Dispatch Tim | # of Units | Frequency |
|---------------|-------------|------------|-----------------------|--------------|------------|-----------|
| Comms         | Base Statio | Motorola   | Bldg. 6 - Pier Office | N/A          | 3          | Several   |
| Comms         | Radio       | Handheld   | Bldg. 6 - Pier Office | 2 Hr.        | Many       | Several   |

| Equipment Typ  | Type     | Make/Model | Location           | Dispatch Tim | # of Units | Power Sour | Fitting Size | GPM     |
|----------------|----------|------------|--------------------|--------------|------------|------------|--------------|---------|
| Portable Pumps | Diaphram | Sandpiper  | Bldg. 1, Section A | 2 Hr.        | 4          | Air        | 3"           | Various |
| Portable Pumps | Vacuum   | Manta Bay  | Bldg. 77           | 2 Hr.        | 1          | Gas        | 3"           | 100     |

| Equipment Typ | Type  | Make/Model        | Location | Length | Dispatch Tim | # of Units | Info |
|---------------|-------|-------------------|----------|--------|--------------|------------|------|
| Sorbents      | Boom  | 3M - Type 270     | Bldg. #1 | N/A    | 1 Hr.        | 10         | None |
| Sorbents      | Boom  | 3M - Type 270     | Bldg. #1 | N/A    | 1 Hr.        | 90         | None |
| Sorbents      | Sweep | 3M                | Bldg. #1 | N/A    | 1 Hr.        | 5          | None |
| Sorbents      | Sweep | 3M                | Bldg. #1 | N/A    | 1 Hr.        | 5          | None |
| Sorbents      | Pads  | 3M - Type 756 & 1 | Bldg. #1 | N/A    | 1 Hr.        | 30         | None |
| Sorbents      | Pads  | 3M - Type 756 & 1 | Bldg. #1 | N/A    | 1 Hr.        | 70         | None |

| Equipment Typ | Type | Make/Model         | Location  | Dispatch Tim | # of Units | Storage Cap | Info |
|---------------|------|--------------------|-----------|--------------|------------|-------------|------|
| Vacuum Trucks | RV   | International 1200 | Bldg. 132 | 2 Hr.        | 2          | 1300        | None |

**US Pollution Control Inc.**

| Equipment Type | Type | Make/Mode | Location | Dispatch Tim | # of Unit | Storage Cap.(bbl | Info |
|----------------|------|-----------|----------|--------------|-----------|------------------|------|
| Barges/Storage | Tank | Fixed     | San Jose | N/A          | 2         | 25000            | None |
| Barges/Storage | Tank | Fixed     | San Jose | N/A          | 9         | 8000             | None |
| Barges/Storage | Tank | Fixed     | San Jose | N/A          | 9         | 2500             | None |

| Equipment Type      | Type         | Make/Mode   | Location | Dispatch Tim | # of Unit | Info |
|---------------------|--------------|-------------|----------|--------------|-----------|------|
| Mobile Command Post | Van          | Ford        | San Jose | 2 Hr.        | 1         | None |
| Mobile Command Post | Step Side Va | Custom Made | San Jose | 2 Hr.        | 1         | None |

| Equipment Type | Type | Make/Mode    | Location | Dispatch Tim | # of Unit | Info      |
|----------------|------|--------------|----------|--------------|-----------|-----------|
| Sorbents       | Bag  | Kitty Litter | San Jose | 2 Hr.        | 400 Bales | 50 lbs ea |
| Sorbents       | Bag  | Vermiculite  | San Jose | 2 Hr.        | 100 Bales | 26 lbs ea |

| Equipment Type | Type  | Make/Mode   | Location | Dispatch Tim | # of Unit | Storage Cap.(bbl | Info |
|----------------|-------|-------------|----------|--------------|-----------|------------------|------|
| Vacuum Trucks  | Truck | Petro Steel | San Jose | 2 Hr.        | 2         | 4500 EA          | None |
| Vacuum Trucks  | Truck | ARCO 8      | San Jose | 2 Hr.        | 1         | 5500             | None |

**USCG Group Humboldt Bay**

| Equipment Typ | Organization           | Servic | Type    | Make/Model  | Location        | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio  | Disp Time |
|---------------|------------------------|--------|---------|-------------|-----------------|----------|--------|--------|----------|-----------|-------|----------------|-----------|
| Boom          | USCG Group Humboldt Ba | Ocean  | Curtain | Sea Curtain | Gru Humboldt Ba | 100'     | 700'   | N/A    | a        | 8"        | 16"   | MSO Trailer #2 | 1 Hr.     |
| Boom          | USCG Group Humboldt Ba | Ocean  | Fence   | Kepner      | Gru Humboldt Ba | 100'     | 1800'  | N/A    | a        | 8"        | 16"   | MSO Trailer #2 | 1 Hr.     |
| Boom          | USCG Group Humboldt Ba | Inland | Harbor  | Kepner      | Gru Humboldt Ba | 100'     | 200'   | N/A    | a        | 6"        | 12"   | MSO Trailer #2 | 1 Hr.     |

| Equipment Typ | Organization           | Type  | Make/Mod | Location         | Length | Disp Tim | # of Unit | Info         |
|---------------|------------------------|-------|----------|------------------|--------|----------|-----------|--------------|
| Sorbents      | USCG Group Humboldt Ba | Pads  | Sorbent  | Gru Humboldt Bay |        | 1 Hr.    | 3 Bales   | 100 per Bale |
| Sorbents      | USCG Group Humboldt Ba | Boom  | Sorbent  | Gru Humboldt Ba  | 240'   | 1 Hr.    | 6 Bales   | 4 per Bale   |
| Sorbents      | USCG Group Humboldt Ba | Sweep | Sorbent  | Gru Humboldt Ba  | 100'   | 1 Hr.    | 1 Roll    |              |
| Sorbents      | USCG Group Humboldt Ba | Bag   | Sorbent  | Gru Humboldt Bay |        | 1 Hr.    | 1 Bag     |              |

USCG Group Monterey

| Equipment Typ | Servic | Type    | Make/Model  | Location         | Length | Connecto | Flotation | Skirt | Transportatio  | Dispatch Time |
|---------------|--------|---------|-------------|------------------|--------|----------|-----------|-------|----------------|---------------|
| Boom          | Ocean  | Curtain | Sea Curtain | Gru/Sta Monterey | 600'   | a        | 11"       | 22"   | MSO Trailer #3 | 1 Hr.         |
| Boom          | Ocean  | Fence   | Kepner      | Gru/Sta Monterey | 200'   | a        | 8"        | 16"   | MSO Trailer #3 | 1 Hr.         |

| Equipment Typ | Type    | Make/Mod | Location         | Length | Dispatch Tim | # of Units | Info         |
|---------------|---------|----------|------------------|--------|--------------|------------|--------------|
| Sorbents      | Pads    | Sorbent  | Gru/Sta Monterey | N/A    | 1 Hr.        | 3 Bales    | 100 Per Bale |
| Sorbents      | Boom    | Sorbent  | Gru/Sta Monterey | 120'   | 1 Hr.        | 3 Bales    | 4 Per Bale   |
| Sorbents      | Pillows | Sorbent  | Gru/Sta Monterey | N/A    | 1 Hr.        | 22         | None         |
| Sorbents      | Strips  | Sorbent  | Gru/Sta Monterey | N/A    | 1 Hr.        | 1 Box      | 100 Per Box  |
| Sorbents      | Bag     | Sorbent  | Gru/Sta Monterey | N/A    | 1 Hr.        | 1 Bag      | None         |

USCGC Edisto (WPB 313)

| Equipment Typ | Servic | Type  | Make/Model | Location                | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio  | Dispatch Time |
|---------------|--------|-------|------------|-------------------------|----------|--------|--------|----------|-----------|-------|----------------|---------------|
| Boom          | Ocean  | Fence | Kepner     | CGC Edisto-Crescent Cit | 100'     | 1800'  | N/A    | a        | 6"        | 12"   | MSO Trailer #8 | 1 Hr.         |
| Boom          | Inland | Mini  | Kepner     | CGC Edisto-Crescent Cit | 50'      | 150'   | N/A    | a        | 3"        | 5"    | MSO Trailer #8 | 1 Hr.         |

| Equipment Typ | Type | Make/Mod | Location                 | Transportation | Dispatch Tim | # of Unit | Info         |
|---------------|------|----------|--------------------------|----------------|--------------|-----------|--------------|
| Sorbents      | Pads | Sorbent  | CGC Edisto-Crescent City |                | 1 Hr.        | 2 Bales   | 100 Per Bale |
| Sorbents      | Boom | Sorbent  | CGC Edisto-Crescent City |                | 1 Hr.        | 4 Bales   | 4 Per Bale   |

USCGC Point Ledge (WPB 82334)

| Equipment Typ | Type | Make/Model     | Location           | Dispatch Tim | # of Unit | Info         |
|---------------|------|----------------|--------------------|--------------|-----------|--------------|
| Sorbents      | Kit  | Sorbents & Dru | Station Noyo Rive  | 1 Hr.        | 1 Kit     | 100 Per Bale |
| Sorbents      | Pads | Sorbent        | Station Noyo River |              | 2 Bales   | 100 Per Bale |
| Sorbents      | Boom | Sorbent        | Station Noyo River |              | 4 Bales   | 4 Per Bale   |

Wickland Oil Comapany (Crockett)

| Equipment Typ | Service | Type    | Make/Model         | Location              | Sections | Length | Length | Connecto | Flotation | Skirt | Transportatio | Dispatch Time |
|---------------|---------|---------|--------------------|-----------------------|----------|--------|--------|----------|-----------|-------|---------------|---------------|
| Boom          | Inland  | Curtain | CES Polycontainmen | Crockett Selby Termin | 8'/50'   | 1600'  | 1600'  | a        | 8"        | 16"   | N/A           | N/A           |
| Boom          | River   | Foam    | American Marine    | Wharf                 | 2'/100'  | 200'   | 200'   | a        | 6"        | 12"   | Tow Vessel    | N/A           |
| Boom          | River   | Foam    | Abasco Gamma       | Wharf                 | 5'/100'  | 500'   | 500'   | b        | 8"        | 16"   | Tow Vessel    | N/A           |
| Boom          | River   | Foam    | American Marine    | Wharf                 | 7'/100'  | 700'   | 700'   | a        | 6"        | 12"   | Tow Vessel    | N/A           |

| Equipment Typ  | Type     | Make/Mod | Location      | Dispatch Time | # of Units | Power Sour | Fitting Siz | GPM |
|----------------|----------|----------|---------------|---------------|------------|------------|-------------|-----|
| Portable Pumps | Diaphram | Wilden   | Plant Trailer | 2 Hr.         | 1          | Air        | 3"          | 104 |

| Equipment Typ | Type | Make/Mod | Location  | Length    | Dispatch Tim | # of Units |
|---------------|------|----------|-----------|-----------|--------------|------------|
| Sorbents      | Pads | 3M       | Warehouse | N/A       | N/A          | 10 Bales   |
| Sorbents      | Boom | 3M       | Warehouse | 15' Sect. | N/A          | 3          |

Woodley Island Marina

| Equipment Type | Type | Make/Mod | Location | Length    | Dispatch Time | # of Units | Info |
|----------------|------|----------|----------|-----------|---------------|------------|------|
| Sorbents       | Pads | 3M       | Marina   | 18" X 18" | 1/2 Hr.       | 100        | None |

| Equipment Type | Type | Make/Mod | Location | # of Unit | Storage Cap.(bbl | Info            |
|----------------|------|----------|----------|-----------|------------------|-----------------|
| Vacuum Trucks  | OWS  | Unknown  | Marina   | 1         | 10               | 45 GPM Recovery |

F-56-SFB



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## **ANNEX F SUMMARY OF AREA RESOURCES**

### **APPENDIX II LOGISTICS**

#### **TAB A**

This appendix includes a summary of the logistical details associated with providing resources to support a response effort in the area. The plan details the source(s) and availability of the items identified. This

# SONOMA COUNTY STAGING SITES

|                       |                   |                    |                   |                   |
|-----------------------|-------------------|--------------------|-------------------|-------------------|
| <b>Name</b>           | Spud Point Marina | Doran Beach Reg Pk | Gualala Pt Reg Pk | Stewart's Point   |
| <b>Address</b>        | 1818 W Shore Dr   | Doran Park Road    | 42401 Coast Hwy 1 | 32000 Coast Hwy 1 |
|                       | Bodega Bay, CA    | Bodega Bay, CA     | The Sea Ranch, CA | Stewart's Point,  |
|                       | 94923             | 94923              | 95497             |                   |
| <b>Phone #</b>        | (707)875-3535     | (707)875-3540      | (707)785-2377     | (707)785-2406     |
| <b>Use</b>            | Marina            | Regional Park      | County Park       | Store             |
| <b>Size</b>           | 2 acres           | 50 acres           | 150 acres         | 4 acres           |
| <b>Storage Area</b>   | Yes               | Yes                | Yes               | Yes               |
| <b>Running Water</b>  | Yes               | Yes                | Yes               | Yes               |
| <b>Sewage Hookups</b> | Yes               | Yes                | Yes               | Yes               |
| <b>Power</b>          | Yes               | Yes                | Yes               | Yes               |
| <b>Outdoor Lights</b> | Yes               | Yes                | Yes               | Yes               |

## SONOMA COUNTY STAGING SITES

|                      |                      |             |             |           |
|----------------------|----------------------|-------------|-------------|-----------|
| <b>Buildings</b>     | _ 2                  | _ Some      | _ 2         | _ 1       |
| <b>Security</b>      | _ Guard, Gates       | _ Gates     | _ Gates     | _ None    |
| <b>Nearest Shore</b> | _ Shoreside          | _ Shoreside | _ Shoreside | _ 100 yds |
| <b>Launch Fac.</b>   | _ Yes                | _ Yes       | _ No        | _ Yes     |
| <b>Berths</b>        | _ Boats < 80ft       | _ No        | _ No        | _ No      |
| <b>Load Limit</b>    | _ 20 Tons            | _ None      | _ None      | _ None    |
| <b>Additional</b>    | _oil/water separator | _ None      | _ None      | _ None    |
| <b>Information</b>   | _5" pipe             | _           | _           | _         |

## SONOMA COUNTY STAGING SITES

| <b>Name</b>           | <b>Timber Cove Cmpgrd</b>             | <b>Salt Pt State Park</b>             | <b>Ocean Cove</b>                     | <b>Stillwater Cove</b>          |
|-----------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------|
| <b>Address</b>        | 21350 Coast Hwy 1<br>Jenner, CA 95450 | 25050 Coast Hwy 1<br>Jenner, CA 95450 | 23125 Coast Hwy 1<br>Jenner, CA 95450 | 22455 Hwy 1<br>Jenner, CA 95450 |
| <b>Phone #</b>        | (707)785-2406                         | (707)847-3221                         | (707)847-3422                         | (707)847-3245                   |
| <b>Use</b>            | Private Campground                    | State Park                            | Ranch                                 | Regional Park                   |
| <b>Size</b>           | 1000 x 3000 ft                        | 6000 acres                            | 150 acres                             | 160 acres                       |
| <b>Storage Area</b>   | Yes                                   | Yes                                   | No                                    | Yes                             |
| <b>Running Water</b>  | Yes                                   | Yes                                   | Yes                                   | Yes                             |
| <b>Sewage Hookups</b> | Yes                                   | Yes                                   | Yes                                   | Yes                             |
| <b>Power</b>          | Yes                                   | Yes                                   | Yes                                   | Yes                             |
| <b>Outdoor Lights</b> | Yes                                   | Yes                                   | Yes                                   | Yes                             |
| <b>Buildings</b>      | None                                  | 4                                     | 4                                     | 1                               |

SONOMA COUNTY STAGING SITES

|                      |           |           |           |             |
|----------------------|-----------|-----------|-----------|-------------|
| <b>Security</b>      | None      | Gate      | Fences    | Gate        |
| <b>Nearest Shore</b> | Shoreside | Shoreside | Shoreside | Shoreside   |
| <b>Launch Fac.</b>   | Yes       | No        | Yes       | Small Craft |
| <b>Berths</b>        | None      | None      | No        | No          |
| <b>Load Limit</b>    | None      | None      | None      | None        |
| <b>Additional</b>    | None      | None      | None      | None        |
| <b>Information</b>   |           |           |           |             |

SONOMA COUNTY STAGING SITES

|                                         |                                             |                          |                          |                          |
|-----------------------------------------|---------------------------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> Name           | <input type="checkbox"/> Port Sonoma        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Address        | <input type="checkbox"/> San Pablo Bay      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Phone #        | <input type="checkbox"/> (707)778-8055      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Use            | <input type="checkbox"/> Marina             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Size           | <input type="checkbox"/> 5 acres/600 pk lot | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Storage Area   | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Running Water  | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Sewage Hookups | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Power          | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Outdoor Lights | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |
| <input type="checkbox"/> Buildings      | <input type="checkbox"/>                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                |                                             |                          |                          |                          |

SONOMA COUNTY STAGING SITES

|                      |                   |   |   |   |
|----------------------|-------------------|---|---|---|
| <b>Security</b>      | Yes               | — | — | — |
| <b>Nearest Shore</b> | Shoreside         | — | — | — |
| <b>Launch Fac.</b>   | Yes               | — | — | — |
| <b>Berths</b>        | Yes               | — | — | — |
| <b>Load Limit</b>    | 200 tons          | — | — | — |
| <b>Additional</b>    | Has permit for    | — | — | — |
| <b>Information</b>   | storage waste oil | — | — | — |



## MARIN COUNTY STAGING SITES

|                       |                           |                         |                         |                        |
|-----------------------|---------------------------|-------------------------|-------------------------|------------------------|
| <b>Name</b>           | <b>Loch Lomond Marina</b> | <b>San Rafael Yacht</b> | <b>Larkspur Landing</b> | <b>Sausalito Ferry</b> |
| <b>Address</b>        | San Pedro Road            | Francisco Blvd          | Ferry Terminal          | Ferry Terminal         |
|                       | San Rafael, CA            | San Rafael, CA          | Sir Francis Drake       | Bridgeway Street       |
|                       |                           |                         | Greenbrae, CA           | Sausalito, CA          |
| <b>Phone #</b>        | (415)454-7228             | (415)456-1600           | (415)461-6016           | (415)461-6016          |
| <b>Use</b>            | Marina                    | Marina                  | Ferry Terminal          | Ferry Terminal         |
| <b>Size</b>           | 20 Acres                  | 15 Acres                | 10 Acres                | 12 Acres               |
| <b>Storage Area</b>   | Yes                       | No                      | No                      | No                     |
| <b>Running Water</b>  | Yes                       | Yes                     | Yes                     | Yes                    |
| <b>Sewage Hookups</b> | Yes                       | Yes                     | Yes                     | Yes                    |
| <b>Power</b>          | Yes                       | Yes                     | Yes                     | Yes                    |
| <b>Outdoor Lights</b> | Yes                       | Yes                     | Yes                     | Yes                    |

## MARIN COUNTY STAGING SITES

|   |                      |             |             |             |             |
|---|----------------------|-------------|-------------|-------------|-------------|
| — | <b>Buildings</b>     | — 2         | — 1         | — 1         | — 1         |
| — |                      |             |             |             |             |
| — | <b>Security</b>      | — Gate      | — Guard     | — Gate      | — Gate      |
| — |                      |             |             |             |             |
| — | <b>Nearest Shore</b> | — Shoreside | — Shoreside | — Shoreside | — Shoreside |
| — |                      |             |             |             |             |
| — | <b>Launch Fac.</b>   | — Yes       | — Yes       | — No        | — No        |
| — |                      |             |             |             |             |
| — | <b>Berths</b>        | — 250       | — 150       | — 6         | — 4         |
| — |                      |             |             |             |             |
| — | <b>Load Limit</b>    | — None      | — None      | — None      | — None      |
| — |                      |             |             |             |             |
| — | <b>Additional</b>    | — None      | — None      | — None      | — None      |
| — |                      |             |             |             |             |
| — | <b>Information</b>   | —           | —           | —           | —           |
| — |                      |             |             |             |             |

## MARIN COUNTY STAGING SITES

|                       |                        |                          |                          |                     |
|-----------------------|------------------------|--------------------------|--------------------------|---------------------|
| <b>Name</b>           | <b>FORT BAKER USCG</b> | <b>US ARMY CORPS ENG</b> | <b>MARIN CIVIC CENTR</b> | <b>HAMILTON AFB</b> |
| <b>Address</b>        | Under Goldn Gate       | 2100 Bridge Wy           | San Pedro                | Hwy 101             |
|                       | San Rafael, CA         | Sausalito, CA            | San Rafael, CA           | Ignacio             |
| <b>Phone #</b>        | (415)561-2211          | (415)332-3871            | (415)499-6584            | (415)883-3221       |
| <b>Use</b>            | USCG Facility          | Govt Facility            | County Gvt Facil.        | DOD Facility        |
| <b>Size</b>           | Parking Area           | 4 Acres                  | 15 Acres                 | Extensive           |
| <b>Storage Area</b>   | No                     | Yes                      | Yes                      | Yes                 |
| <b>Running Water</b>  | linked                 | Yes                      | Yes                      | Yes                 |
| <b>Sewage Hookups</b> | limited                | Yes                      | Yes                      | Yes                 |
| <b>Power</b>          | Limited                | Yes                      | Yes                      | Yes                 |
| <b>Outdoor Lights</b> | Yes                    | Yes                      | Yes                      | Yes                 |
| <b>Buildings</b>      | No                     | Yes                      | Yes                      | Yes                 |

## MARIN COUNTY STAGING SITES

|                                        |                                  |                                  |                                  |                                   |
|----------------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| <input type="checkbox"/> Security      | <input type="checkbox"/> Yes     | <input type="checkbox"/> Yes     | <input type="checkbox"/> Yes     | <input type="checkbox"/> Yes      |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Nearest Shore | <input type="checkbox"/> Bayside | <input type="checkbox"/> Bayside | <input type="checkbox"/> 5 miles | <input type="checkbox"/> 10 miles |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Launch Fac.   | <input type="checkbox"/> No      | <input type="checkbox"/> Nearby  | <input type="checkbox"/> No      | <input type="checkbox"/> No       |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Berths        | <input type="checkbox"/> No      | <input type="checkbox"/> Nearby  | <input type="checkbox"/> No      | <input type="checkbox"/> No       |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Load Limit    | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/> N/A      |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Additional    | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/>          |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/> Information   | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/>         | <input type="checkbox"/>          |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |
| <input type="checkbox"/>               |                                  |                                  |                                  |                                   |

## MARIN COUNTY STAGING SITES

| <b>Name</b>           | <b>GGNRA SO.MARIN H/L</b>               | <b>GGNRA MUIR BEACH</b> | <b>GGNRA STINSON BEACH</b> | <b>GGNRA DRAKES BEACH</b>       |  |
|-----------------------|-----------------------------------------|-------------------------|----------------------------|---------------------------------|--|
| <b>Address</b>        | 101 Exit to<br>South Marin<br>Headlands | HWY 1<br>Muir Beach     | HWY 1<br>Stinson Beach     | Pt Reyes Nat'l Park<br>Pt Reyes |  |
| <b>Phone #</b>        | (415)556-0560                           | (415)556-0560           | (415)556-0560              | (415)556-0560                   |  |
| <b>Use</b>            | Park                                    | Park                    | Park                       | Park                            |  |
| <b>Size</b>           | Extensive                               | Large                   | Extensive                  | Extensive                       |  |
| <b>Storage Area</b>   | Yes                                     | No                      | No                         | No                              |  |
| <b>Running Water</b>  | Yes                                     | Yes                     | Yes                        | Yes                             |  |
| <b>Sewage Hookups</b> | Yes                                     | Limited                 | Yes                        | Yes                             |  |
| <b>Power</b>          | Yes                                     | Limited                 | Yes                        | Yes                             |  |
| <b>Outdoor Lights</b> | Some                                    |                         |                            | Yes                             |  |

## MARIN COUNTY STAGING SITES

|                      |           |            |            |            |  |
|----------------------|-----------|------------|------------|------------|--|
| <b>Buildings</b>     | Yes       | No         | No         | Yes        |  |
| <b>Security</b>      | Yes       | Yes        | Yes        | Yes        |  |
| <b>Nearest Shore</b> | Shoreline | Beachfront | Beachfront | Beachfront |  |
| <b>Launch Fac.</b>   | No        | No         | Yes        | No         |  |
| <b>Berths</b>        | No        | No         | Nearby     | No         |  |

|   |             |   |   |   |   |
|---|-------------|---|---|---|---|
| — | Load Limit  | — | — | — | — |
| — |             |   |   |   |   |
| — | Additional  | — | — | — | — |
| — |             |   |   |   |   |
| — | Information | — | — | — | — |
| — |             |   |   |   |   |
|   |             |   |   |   |   |

## MARIN COUNTY STAGING SITES

| <b>Name</b>           | <b>MARCONI CONF. CTR</b>       | <b>MILLER POINT PARK</b>  | <b>BOLINAS, TOWN OF</b> | <b>LAWSON'S LANDING</b> |
|-----------------------|--------------------------------|---------------------------|-------------------------|-------------------------|
| <b>Address</b>        | HWY 1 Marconi Cove<br>Marshall | HWY 1 (3mi N<br>Marshall) | HWY 1<br>Bolin          | Dillon Beach            |
| <b>Phone #</b>        | (415)663-9020                  | (415)499-6387             | (415)499-6584           | (707)878-2204           |
| <b>Use</b>            | Park Conference Ctr            | Park                      | Town                    | Private Resort          |
| <b>Size</b>           | Extensive                      | 3+ Acres                  |                         | Extensive               |
| <b>Storage Area</b>   | Yes                            | No                        |                         | Yes                     |
| <b>Running Water</b>  | Yes                            | Yes                       |                         | Yes                     |
| <b>Sewage Hookups</b> | Yes                            | Limited                   |                         | Yes                     |
| <b>Power</b>          | Yes                            | Yes                       |                         | Yes                     |
| <b>Outdoor Lights</b> | Yes                            | Limited                   |                         | Yes                     |

## MARIN COUNTY STAGING SITES

|                      |          |            |          |            |
|----------------------|----------|------------|----------|------------|
| <b>Buildings</b>     | Yes      | No         |          | Yes        |
| <b>Security</b>      | Yes      | Yes        |          | Yes        |
| <b>Nearest Shore</b> | At Beach | Beachfront | 10 miles | Beachfront |
| <b>Launch Fac.</b>   | Nearby   | Yes        | No       | Yes        |
| <b>Berths</b>        | Nearby   | Nearby     | No       | Yes        |

|                      |               |               |                   |                   |
|----------------------|---------------|---------------|-------------------|-------------------|
| _ <b>Load Limit</b>  | _ N/A         | _             | _                 | _                 |
| _                    |               |               |                   |                   |
| _ <b>Additional</b>  | _ Tomalas Bay | _ Tomalas Bay | _ Staging Support | _Proximal Tomalas |
| _                    |               |               |                   |                   |
| _ <b>Information</b> | _ Site        | _ Lauch Site  | _                 | _ Bay Entrance    |
| _                    |               |               |                   |                   |
|                      |               |               |                   |                   |



## MARIN COUNTY STAGING SITES

|                       |                    |  |  |  |
|-----------------------|--------------------|--|--|--|
| <b>Name</b>           | MARIN ROD & GUN    |  |  |  |
| <b>Address</b>        | Foot of San Rafael |  |  |  |
|                       | Bridge             |  |  |  |
| <b>Phone #</b>        | 415-459-9845       |  |  |  |
| <b>Use</b>            | Private Club       |  |  |  |
| <b>Size</b>           | 5+ Acres           |  |  |  |
| <b>Storage Area</b>   | Nearby             |  |  |  |
| <b>Running Water</b>  | Yes                |  |  |  |
| <b>Sewage Hookups</b> | Yes                |  |  |  |
| <b>Power</b>          | Yes                |  |  |  |
| <b>Outdoor Lights</b> | Yes                |  |  |  |
| <b>Buildings</b>      | Limited            |  |  |  |

## MARIN COUNTY STAGING SITES

|                                        |                                 |                          |                          |                          |
|----------------------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> Security      | <input type="checkbox"/> Yes    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Nearest Shore | <input type="checkbox"/> Nearby | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Launch Fac.   | <input type="checkbox"/> Nearby | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Berths        | <input type="checkbox"/> Nearby | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Load Limit    | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Additional    | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/> Information   | <input type="checkbox"/>        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>               |                                 |                          |                          |                          |
| <input type="checkbox"/>               |                                 |                          |                          |                          |

# NAPA COUNTY STAGING SITES

|                          |                       |                                          |                                             |                          |                          |
|--------------------------|-----------------------|------------------------------------------|---------------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <b>Name</b>           | <input type="checkbox"/> Napa Co Airport | <input type="checkbox"/> Napa Valley Marina | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Address</b>        | <input type="checkbox"/> 2030 Airport Rd | <input type="checkbox"/> 1200 Milton Rd     | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> |                       | <input type="checkbox"/> Napa, CA 94559  | <input type="checkbox"/> Napa, CA 94559     | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Phone #</b>        | <input type="checkbox"/> (707)253-4300   | <input type="checkbox"/> (707)252-8011      | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Use</b>            | <input type="checkbox"/> Airport         | <input type="checkbox"/> Marina             | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Size</b>           | <input type="checkbox"/> 2 square miles  | <input type="checkbox"/> 30 acres           | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Storage Area</b>   | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Running Water</b>  | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Sewage Hookups</b> | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Power</b>          | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Outdoor Lights</b> | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes                | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/> | <b>Buildings</b>      | <input type="checkbox"/> 12              | <input type="checkbox"/> 10                 | <input type="checkbox"/> | <input type="checkbox"/> |

|                        |         |           |  |  |
|------------------------|---------|-----------|--|--|
| Security               | Fence   | None      |  |  |
| Nearest Shore          | 2 miles | Shoreside |  |  |
| Launch Fac.            | No      | Yes       |  |  |
| Berths                 | None    | 200       |  |  |
| Load Limit             | None    | None      |  |  |
| Additional Information | None    | None      |  |  |

SOLANO COUNTY STAGING SITES

| <b>Name</b>           | <b>Exxon Benicia</b> | <b>Benicia Ind, Pr 95</b> | <b>Benicia Marina</b> | <b>Vallejo Muni. Mar.</b> |
|-----------------------|----------------------|---------------------------|-----------------------|---------------------------|
| <b>Address</b>        | <b>Refinery Dock</b> | 1997 Elm St               | 266 East B            | 7 Harbor Way              |
|                       | 3400 E. 2nd St       | Benicia, CA 94510         | Benicia, CA 94510     | Vallejo, CA 94590         |
|                       | Benicia, CA 94510    |                           |                       |                           |
| <b>Phone #</b>        | (707)745-7933        | (707)745-2394             | (707)745-2628         | (707)648-4370             |
| <b>Use</b>            | Refinery Dock        | Auto Import/Export        | Marina                | Municipal Marina          |
| <b>Size</b>           | 900 feet long        | 2422 ft x 80 ft           | 30 acres              | 1 ml long x 300'          |
| <b>Storage Area</b>   | No                   | No                        | 1 acre                | No                        |
| <b>Running Water</b>  | Yes                  | Yes                       | Yes                   | Yes                       |
| <b>Sewage Hookups</b> | Yes                  | Yes                       | Yes                   | Yes                       |
| <b>Power</b>          | Yes                  | Yes                       | Yes                   | Yes                       |
| <b>Outdoor Lights</b> | Yes                  | Yes                       | Yes                   | Yes                       |
| <b>Buildings</b>      | 2                    | 1                         | 2                     | 7                         |
| <b>Security</b>       | Gate                 | Gate                      | Gate                  | Gate                      |
| <b>Nearest Shore</b>  | Shoreside            | Shoreside                 | Shoreside             | Shoreside                 |
| <b>Launch Fac.</b>    | No                   | No                        | Yes                   | 1 ml down road            |
| <b>Berths</b>         | 1                    | 3                         | 350                   | 810                       |

SOLANO COUNTY STAGING SITES

|                               |                        |                               |                             |                              |
|-------------------------------|------------------------|-------------------------------|-----------------------------|------------------------------|
| <b>Load Limit</b>             | 10,700 lbs             | 400 lbs/sq ft                 | Unknown                     | None                         |
| <b>Additional Information</b> | None                   | 1500 lbs Winch on west end    | Storage area is full        | None                         |
| <b>Name</b>                   | USCG STA, Mare Is.     | USCG STA, RioVista            | Sandy Beach Park            | Brinkman's Marina            |
| <b>Address</b>                | Vallejo, CA 94592-5100 | 900 Beach Drive Rio Vista, CA | 1100 Beach Dr Rio Vista, CA | 1 Curtola Prkway Vallejo, CA |
| <b>Phone #</b>                | (707)646-0701          | (707)374-2871                 | (707)374-2097               | Vallejo Fire Dept            |
| <b>Use</b>                    | Coast Guard Sta        | Coast Guard Sta               | Recreation                  | Marina                       |
| <b>Size</b>                   | 1000 x 1200 ft         | 2 acres                       | 10 acres                    | 1 acres & nearby             |
| <b>Storage Area</b>           | Yes                    | Yes                           | Yes                         | Yes                          |
| <b>Running Water</b>          | Yes                    | Yes                           | Yes                         | Yes                          |
| <b>Sewage Hookups</b>         | Yes                    | Yes                           | Yes                         | Yes                          |

SOLANO COUNTY STAGING SITES

|                       |                |              |           |            |
|-----------------------|----------------|--------------|-----------|------------|
| <b>Power</b>          | Yes            | Yes          | Yes       | Yes        |
| <b>Outdoor Lights</b> | Yes            | Yes          | Yes       | Yes        |
| <b>Buildings</b>      | 2              | 2            | None      | Restaurant |
| <b>Security</b>       | Mare Island PD | Watchstander | Yes       |            |
| <b>Nearest Shore</b>  | Shoreside      | Shoreside    | Beachside | Beachside  |

|                                             |                                          |                               |                                  |                                         |
|---------------------------------------------|------------------------------------------|-------------------------------|----------------------------------|-----------------------------------------|
| <input type="checkbox"/> <b>Launch Fac.</b> | <input type="checkbox"/> Yes             | <input type="checkbox"/> No   | <input type="checkbox"/> Yes     | <input type="checkbox"/> Yes            |
| <input type="checkbox"/>                    |                                          |                               |                                  |                                         |
| <input type="checkbox"/> <b>Berths</b>      | <input type="checkbox"/> 1 Floating Dock | <input type="checkbox"/> No   | <input type="checkbox"/> Nearby  | <input type="checkbox"/> Yes            |
| <input type="checkbox"/>                    |                                          |                               |                                  |                                         |
| <input type="checkbox"/> <b>Load Limit</b>  | <input type="checkbox"/> None            | <input type="checkbox"/> None | <input type="checkbox"/> 10 tons | <input type="checkbox"/> 10 tons +      |
| <input type="checkbox"/>                    |                                          |                               |                                  |                                         |
| <input type="checkbox"/> <b>Additional</b>  | <input type="checkbox"/> None            | <input type="checkbox"/> None | <input type="checkbox"/> None    | <input type="checkbox"/> Private Marina |
| <input type="checkbox"/>                    |                                          |                               |                                  |                                         |
| <input type="checkbox"/> <b>Information</b> | <input type="checkbox"/>                 | <input type="checkbox"/>      | <input type="checkbox"/>         | <input type="checkbox"/> Nearby land/   |
| facil._                                     |                                          |                               |                                  |                                         |

SAN MATEO COUNTY STAGING SITES

|              |                       |                                   |                                  |                                          |                                 |
|--------------|-----------------------|-----------------------------------|----------------------------------|------------------------------------------|---------------------------------|
| F - 80 - SFB | <b>Name</b>           | <b>Exposition Center</b>          | <b>Brisbane Elem Schl</b>        | <b>Municipal Center</b>                  | <b>Dept Frstry &amp; Fire</b>   |
|              | <b>Address</b>        | 2495 S. Delaware<br>San Mateo, CA | San Bruno Street<br>Brisbane, CA | 2145 University St<br>East Palo Alto, CA | Pescadero Road<br>Pescadero, CA |
|              | <b>Phone #</b>        | (415)573-2126                     | (415)467-0120                    | (415)853-3100                            | (415)879-0121                   |
|              | <b>Use</b>            | Conventions, etc.                 | School                           | City/County Gov                          | Fire Department                 |
|              | <b>Size</b>           | 197,186 sq ft                     | 5 acres                          | 97 x 167 feet                            | 300 square feet                 |
|              | <b>Storage Area</b>   | Yes                               | Yes                              | Yes                                      | No                              |
|              | <b>Running Water</b>  | Yes                               | Yes                              | Yes                                      | Yes                             |
|              | <b>Sewage Hookups</b> | Yes                               | Yes                              | Yes                                      | Yes                             |
|              | <b>Power</b>          | Yes                               | Yes                              | Yes                                      | Yes                             |
|              | <b>Outdoor Lights</b> | Yes                               | Yes                              | Yes                                      | Yes                             |
|              | <b>Buildings</b>      | 1                                 | 3                                | 1                                        | 1                               |
|              | <b>Security</b>       | Gate                              | None                             | None                                     | None                            |
|              | <b>Nearest Shore</b>  | mile                              | 1 mile                           | 1 mile                                   | mile                            |
|              | <b>Launch Fac.</b>    | No                                | No                               | No                                       | No                              |
|              | <b>Berths</b>         | None                              | None                             | None                                     | None                            |
|              | <b>Load Limit</b>     | None                              | None                             | None                                     | None                            |



SAN MATEO COUNTY STAGING SITES

|                               |                                  |                                      |                        |                           |  |
|-------------------------------|----------------------------------|--------------------------------------|------------------------|---------------------------|--|
| <b>Additional Information</b> | None                             | None                                 | None                   | None                      |  |
| <b>Name</b>                   | <b>City Hall Pkg Lot</b>         | <b>Redwood Yacht Har.</b>            | <b>Brisbane Harbor</b> | <b>Half Moon Bay Air.</b> |  |
| <b>Address</b>                | 666 Elm Street<br>San Carlos, CA | 625 Seaport Blvd<br>Redwood City, CA | 400 Marina Blvd        | 6 mi HMB on Rt 1          |  |
| <b>Phone #</b>                | (415)593-8011                    | (415)306-4150                        | (415)583-6975          | (415)573-3700             |  |
| <b>Use</b>                    | Parking Lot                      | Marina                               | Marina                 | Airport                   |  |
| <b>Size</b>                   | 400 square feet                  | 1 acre Pking lot                     | 40 acres               | 20 Acres                  |  |
| <b>Storage Area</b>           | No                               | Yes                                  | Maintenance Yard       | Airport Hanger            |  |
| <b>Running Water</b>          | No                               | No                                   | Yes                    | Yes                       |  |
| <b>Sewage Hookups</b>         | No                               | Yes                                  | No                     | Septic tanks              |  |
| <b>Power</b>                  | No                               | Yes                                  | No                     | Buildings only            |  |
| <b>Outdoor Lights</b>         | Yes                              | Yes                                  | Yes, Pking lot         | Around transit pkg        |  |
| <b>Buildings</b>              | Not Available                    | Yes                                  | 1                      | Yes                       |  |
| <b>Security</b>               | None                             | Yes                                  | Yes                    | Yes                       |  |
| <b>Nearest Shore</b>          | 1 mile                           | 100 ft                               | 150 ft                 | 1 mile                    |  |
| <b>Launch Fac.</b>            | No                               | 1                                    | No                     | No                        |  |
| <b>Berths</b>                 | None                             | Yes                                  | Yes                    | No                        |  |

SAN MATEO COUNTY STAGING SITES

|                                                                        |                                           |                                                   |                                                   |                                                          |
|------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------|---------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> <b>Load Limit</b>                             | <input type="checkbox"/> None             | <input type="checkbox"/> 500 lbs sqft             | <input type="checkbox"/> Concrete ft docks        | <input type="checkbox"/> N/A                             |
| <input type="checkbox"/> <b>Additional Information</b>                 | <input type="checkbox"/> None             | <input type="checkbox"/> Coordinate thru Area OES | <input type="checkbox"/> Coordinate thru Area OES | <input type="checkbox"/> Coordinate thru Area OES        |
| <input type="checkbox"/> <b>Name</b>                                   | <input type="checkbox"/> Peninsula Marina | <input type="checkbox"/> Pete's Harbor            | <input type="checkbox"/> Pillar Point Har.        | <input type="checkbox"/> Coyote Pt Marina                |
| <input type="checkbox"/> <b>Address</b><br>Dr <input type="checkbox"/> | <input type="checkbox"/> 650 Bair Isl Rd  | <input type="checkbox"/> 1 Uccelli Blvd           | <input type="checkbox"/> 1 Johnson Pier           | <input type="checkbox"/> 1900 Coyote Pt<br>San Mateo, CA |
| <input type="checkbox"/> <b>Phone #</b>                                | <input type="checkbox"/> (415)369-0869    | <input type="checkbox"/> (415)366-0922            | <input type="checkbox"/> (415)726-5727            | <input type="checkbox"/> (415)952-0808                   |
| <input type="checkbox"/> <b>Use</b>                                    | <input type="checkbox"/> Marina           | <input type="checkbox"/> Marina                   | <input type="checkbox"/> Marina                   | <input type="checkbox"/> Rec. Marina                     |
| <input type="checkbox"/> <b>Size</b>                                   | <input type="checkbox"/> 2 Acre Pking lot | <input type="checkbox"/> 3 acre Pking lot         | <input type="checkbox"/> 4 acre Pking lot         | <input type="checkbox"/> Small Pking lot                 |
| <input type="checkbox"/> <b>Storage Area</b>                           | <input type="checkbox"/> No               | <input type="checkbox"/> Parking lot              | <input type="checkbox"/> P. lot/open field        | <input type="checkbox"/> No                              |
| <input type="checkbox"/> <b>Running Water</b>                          | <input type="checkbox"/> Yes              | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Fire Hydrant                    |
| <input type="checkbox"/> <b>Sewage Hookups</b>                         | <input type="checkbox"/> No               | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                      | <input type="checkbox"/> No                              |

SAN MATEO STAGING SITES

|                       |                                            |                                          |                                            |                                          |
|-----------------------|--------------------------------------------|------------------------------------------|--------------------------------------------|------------------------------------------|
| <b>Power</b>          | <input type="checkbox"/> No                | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes               | <input type="checkbox"/> No              |
| <b>Outdoor Lights</b> | <input type="checkbox"/> Yes               | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes               | <input type="checkbox"/> No              |
| <b>Buildings</b>      | <input type="checkbox"/> Office space      | <input type="checkbox"/> 3,000 sq ft     | <input type="checkbox"/> None              | <input type="checkbox"/> No              |
| <b>Security</b>       | <input type="checkbox"/> Yes               | <input type="checkbox"/> No              | <input type="checkbox"/> Yes               | <input type="checkbox"/> No              |
| <b>Nearest Shore</b>  | <input type="checkbox"/> 1,000 ft          | <input type="checkbox"/> 100 yds         | <input type="checkbox"/> 200 ft            | <input type="checkbox"/> Adj to          |
| <b>Launch Fac.</b>    | <input type="checkbox"/> Doc town          | <input type="checkbox"/> No              | <input type="checkbox"/> Yes               | <input type="checkbox"/> 3 lane          |
| <b>Berths</b>         | <input type="checkbox"/> No                | <input type="checkbox"/> No              | <input type="checkbox"/> Yes               | <input type="checkbox"/> Yes             |
| <b>Load Limit</b>     | <input type="checkbox"/> Floating Concrete | <input type="checkbox"/> N/A             | <input type="checkbox"/> 1 ton floating Dk | <input type="checkbox"/> People only     |
| <b>Additional</b>     | <input type="checkbox"/> Coordinate thru   | <input type="checkbox"/> Coordinate thru | <input type="checkbox"/> Coordinate thru   | <input type="checkbox"/> Coordinate thru |
| <b>Information</b>    | <input type="checkbox"/> Area OES          | <input type="checkbox"/> Area OES        | <input type="checkbox"/> Area OES          | <input type="checkbox"/> Area OES        |

SAN MATEO STAGING SITES

|                       |                         |                         |  |
|-----------------------|-------------------------|-------------------------|--|
| <b>Name</b>           | <b>Oyster Cove Mar.</b> | <b>Oyster Pt Marina</b> |  |
| <b>Address</b>        | 385 Oyster Pt Blvd      | 95 Harbor Mstr Rd       |  |
|                       |                         | South San Fran          |  |
| <b>Phone #</b>        | (415)952-5540           | (415)952-0808           |  |
| <b>Use</b>            | Marina                  | Marina                  |  |
| <b>Size</b>           | acre Pking lot          | 4 acre Pking lot        |  |
| <b>Storage Area</b>   |                         |                         |  |
| <b>Running Water</b>  | Yes                     | Fire Hydrant            |  |
| <b>Sewage Hookups</b> | No                      | No                      |  |
| <b>Power</b>          | Yes                     | Yes                     |  |
| <b>Outdoor Lights</b> | Yes                     | Yes                     |  |
| <b>Buildings</b>      | Warehouse               | Maint. Blding           |  |

SAN MATEO STAGING SITES

|                                               |                                          |                                          |                          |                          |
|-----------------------------------------------|------------------------------------------|------------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> <b>Security</b>      | <input type="checkbox"/> Yes             | <input type="checkbox"/> Yes             | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Nearest Shore</b> | <input type="checkbox"/> 50 yds          | <input type="checkbox"/> 100 yds         | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Launch Fac.</b>   | <input type="checkbox"/> None            | <input type="checkbox"/> Yes             | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Berths</b>        | <input type="checkbox"/> None            | <input type="checkbox"/> Yes             | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Load Limit</b>    | <input type="checkbox"/> N/A             | <input type="checkbox"/>                 | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Additional</b>    | <input type="checkbox"/> Coordinate thru | <input type="checkbox"/> Coordinate thru | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
| <input type="checkbox"/> <b>Information</b>   | <input type="checkbox"/> Area OES        | <input type="checkbox"/> Area OES        | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>                      |                                          |                                          |                          |                          |
|                                               |                                          |                                          |                          |                          |

SAN FRANCISCO COUNTY STAGING SITES

| <b>Name</b>           | <b>Fort Funston</b> | <b>Fort Mason, Pr 1</b>            | <b>Fisherman's Wharf</b>           | <b>Piers 27 &amp; 29</b>                |  |
|-----------------------|---------------------|------------------------------------|------------------------------------|-----------------------------------------|--|
| <b>Address</b>        | Skyline Blvd        |                                    | At Taylor and<br>Jefferson Streets | On Battery Street<br>at the Embarcadero |  |
| <b>Phone #</b>        | (415)864-2579       | (415)864-2579                      | (415)981-7437                      | (415)864-2579                           |  |
| <b>Use</b>            | Recreation Area     | Urban                              | Leased Sheds                       | Paper Terminal                          |  |
| <b>Size</b>           | 10 acres            | Three Acres                        | 11 Acres                           | 2 Acre                                  |  |
| <b>Storage Area</b>   | 5 acres             | Yes                                | Yes                                | Yes                                     |  |
| <b>Running Water</b>  | Operating           | Yes                                | Yes                                | Yes                                     |  |
| <b>Sewage Hookups</b> | Leach Fields        | Yes                                | Yes                                | Yes                                     |  |
| <b>Power</b>          | Available           | Yes                                | Yes                                | Yes                                     |  |
| <b>Outdoor Lights</b> | Limited             | Yes                                | Yes                                | Yes                                     |  |
| <b>Buildings</b>      | One                 | One<br>SAN FRANCISCO STAGING SITES | Four Sheds                         | Pier Sheds                              |  |
| <b>Security</b>       | Gated               | Yes                                | Yes                                | Port Security                           |  |
| <b>Nearest Shore</b>  | One Quarter Mile    | On Shoreline                       | Pier 45-Over Water                 | Over water                              |  |
| <b>Launch Fac.</b>    | None                | Yes                                | None                               | None                                    |  |
| <b>Berths</b>         | None                | Two                                | Warf & nearby                      | Warf & nearby                           |  |
| <b>Load Limit</b>     | N/A                 | Three Tons                         | N/A                                | N/A                                     |  |

|                    |                           |                           |  |
|--------------------|---------------------------|---------------------------|--|
| <b>Additional</b>  | <b>This facility does</b> | <b>South side Pier 45</b> |  |
| <b>Information</b> | <b>not have a dock</b>    | <b>no good mooring</b>    |  |

SAN FRANCISCO COUNTY STAGING SITES

|                                                |                                           |                                                   |                                                    |                          |
|------------------------------------------------|-------------------------------------------|---------------------------------------------------|----------------------------------------------------|--------------------------|
| <input type="checkbox"/> <b>Name</b>           | <input type="checkbox"/> <b>Pier 38</b>   | <input type="checkbox"/> <b>China Basin, Pr48</b> | <input type="checkbox"/> <b>Pr90/92 Grain Term</b> | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Address</b>        | <input type="checkbox"/> Foot of Townsend | <input type="checkbox"/> Corner of Fourth         | <input type="checkbox"/> End of Amador             | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           | <input type="checkbox"/> and Mission Rock         | <input type="checkbox"/> Street                    | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           | <input type="checkbox"/> Streets                  | <input type="checkbox"/>                           | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Phone #</b>        | <input type="checkbox"/> (510)685-2800    | <input type="checkbox"/> (415)864-2579            | <input type="checkbox"/> (415)864-2579             | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Use</b>            | <input type="checkbox"/> Not used         | <input type="checkbox"/> Not used                 | <input type="checkbox"/> Not used                  | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Size</b>           | <input type="checkbox"/> 2 acres          | <input type="checkbox"/> 2 acre                   | <input type="checkbox"/> 2 acres                   | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Storage Area</b>   | <input type="checkbox"/> Yes              | <input type="checkbox"/> Large sheds              | <input type="checkbox"/> Large open area           | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Running Water</b>  | <input type="checkbox"/> Yes              | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                       | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Sewage Hookups</b> | <input type="checkbox"/> Yes              | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                       | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Power</b>          | <input type="checkbox"/> Yes              | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                       | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |
| <input type="checkbox"/> <b>Outdoor Lights</b> | <input type="checkbox"/> Yes              | <input type="checkbox"/> Yes                      | <input type="checkbox"/> Yes                       | <input type="checkbox"/> |
| <input type="checkbox"/>                       |                                           |                                                   |                                                    |                          |



SAN FRANCISCO COUNTY STAGING SITES

|                          |                                         |                                            |                                            |                          |
|--------------------------|-----------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------|
| <b>Buildings</b>         | <input type="checkbox"/> One Pier Shed  | <input type="checkbox"/> Two               | <input type="checkbox"/> Three             | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Security</b>          | <input type="checkbox"/> Shed Door      | <input type="checkbox"/> Gates             | <input type="checkbox"/> Fences & Gates    | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Nearest Shore</b>     | <input type="checkbox"/> Over Water     | <input type="checkbox"/> Over Water        | <input type="checkbox"/> Over Water        | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Launch Fac.</b>       | <input type="checkbox"/> Pier 52 Nearby | <input type="checkbox"/> Nearby at Pier 52 | <input type="checkbox"/> Nearest China Bsn | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Berths</b>            | <input type="checkbox"/> Warf's nearby  | <input type="checkbox"/> Warf's nearby     | <input type="checkbox"/> None              | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Load Limit</b>        | <input type="checkbox"/> N/A            | <input type="checkbox"/> 500 lbs/sq ft     | <input type="checkbox"/> Uncalculated      | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Additional</b>        | <input type="checkbox"/>                | <input type="checkbox"/>                   | <input type="checkbox"/>                   | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |
| <b>Information</b>       | <input type="checkbox"/>                | <input type="checkbox"/>                   | <input type="checkbox"/>                   | <input type="checkbox"/> |
| <input type="checkbox"/> |                                         |                                            |                                            |                          |

ALAMEDA COUNTY STAGING SITES

| <b>Name</b>                  | <b>Oakland Airport</b>         | <b>Oakland Coliseum</b>        | <b>Hayward Shore Line</b>        | <b>USFWS South Bay</b>     |
|------------------------------|--------------------------------|--------------------------------|----------------------------------|----------------------------|
| <b>Address</b>               | Hegganburger Dr<br>Oakland, CA | Hegganburger Dr<br>Oakland, CA | 30101 W Winton Av<br>Hayward, CA | Thornton Rd<br>Hayward, CA |
| <b>Phone #</b>               | (510)577-4000                  | (510)667-7740                  | (510)783-1066                    | (510)792-0222              |
| <b>Use</b>                   | Airport                        | Public Events                  | Park HQ                          | Wildlife Preserve          |
| <b>Size</b>                  | 50 acres                       | 20 acres                       | 1 acre                           | 20 acres                   |
| <b>Storage Area</b>          | Yes                            | No                             | Yes                              | Yes                        |
| <b>Running Water</b>         | Yes                            | Yes                            | Yes                              | Yes                        |
| <b>Sewage Hookups</b>        | Yes                            | Yes                            | Yes                              | No                         |
| <b>Power</b>                 | Yes                            | Yes                            | Yes                              | Yes                        |
| <b>Outdoor Lights</b>        | Yes                            | Yes                            | No                               | No                         |
| ALAMEDA COUNTY STAGING SITES |                                |                                |                                  |                            |
| <b>Buildings</b>             | Yes                            | Nearby                         | Nearby                           | Yes                        |
| <b>Security</b>              | Yes                            | Yes                            | Yes                              | Yes                        |
| <b>Nearest Shore</b>         | mile                           | 2 miles                        | Less than 1 mile                 | less than 1 mile           |
| <b>Launch Fac.</b>           | Nearby                         | Yes                            | Yes                              | Yes                        |
| <b>Berths</b>                | No                             | Nearby                         | No                               | No                         |

|                               |                        |                        |                         |                                      |
|-------------------------------|------------------------|------------------------|-------------------------|--------------------------------------|
| <b>Load Limit</b>             | N/A                    | N/A                    | N/A                     | weather dependant                    |
| <b>Additional Information</b> | County OES stging site | County OES stging site | East Bay Regional Parks | Roadways subject to wet season close |

ALAMEDA COUNTY STAGING SITES

| <b>_ Name<br/>Base _</b> | <b>_ Alameda Navy Air.</b> | <b>_ Alameda Naval Sup.</b> | <b>_ Oakland Naval Sup.</b> | <b>_ Oakland Army</b> |
|--------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------|
| <b>_ Address</b>         | <b>_ Main Street</b>       | <b>_ Marina Sq Loop</b>     | <b>_ Maritime Rd</b>        | <b>_ Maritime Rd</b>  |
| <b>_</b>                 | <b>_ Alameda, CA</b>       | <b>_ Alameda, CA</b>        | <b>_ Oakland, CA</b>        | <b>_ Oakland, CA</b>  |
| <b>_</b>                 | <b>_</b>                   | <b>_</b>                    | <b>_</b>                    | <b>_</b>              |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Phone #</b>         | <b>_ (510)263-3011</b>     | <b>_</b>                    | <b>_</b>                    | <b>_</b>              |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Use</b>             | <b>_ Air Base</b>          | <b>_ Naval Supply</b>       | <b>_ Navy Supply</b>        | <b>_ Army Supply</b>  |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Size</b>            | <b>_ Extensive</b>         | <b>_ Extensive</b>          | <b>_ Extensive</b>          | <b>_ Extensive</b>    |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Storage Area</b>    | <b>_ Yes</b>               | <b>_ No</b>                 | <b>_ Yes</b>                | <b>_ Yes</b>          |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Running Water</b>   | <b>_ Yes</b>               | <b>_ Yes</b>                | <b>_ Yes</b>                | <b>_ Yes</b>          |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Sewage Hookups</b>  | <b>_ Yes</b>               | <b>_ Yes</b>                | <b>_ Yes</b>                | <b>_ Yes</b>          |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Power</b>           | <b>_ Yes</b>               | <b>_ Yes</b>                | <b>_ Yes</b>                | <b>_ Yes</b>          |
| <b>_</b>                 |                            |                             |                             |                       |
| <b>_ Outdoor Lights</b>  | <b>_ Yes</b>               | <b>_ Yes</b>                | <b>_ Yes</b>                | <b>_ Yes</b>          |
| <b>_</b>                 |                            |                             |                             |                       |

ALAMEDA COUNTY STAGING SITES

|                               |                             |                 |                |                 |  |
|-------------------------------|-----------------------------|-----------------|----------------|-----------------|--|
| <b>Buildings</b>              | Yes                         | Yes             | Yes            | Yes             |  |
| <b>Security</b>               | Partial                     | Secured Area    | Secured Area   | Secured Area    |  |
| <b>Nearest Shore</b>          | Oakland Estuary             | Oakland Estuary | S.F. Bay Front | S. F. Bay Front |  |
| <b>Launch Fac.</b>            | Nearby                      | Nearby          | Nearby         | Nearby          |  |
| <b>Berths</b>                 | Yes                         | Yes             | Yes            | Yes             |  |
| <b>Load Limit</b>             | None                        | None            | None           | None            |  |
| <b>Additional Information</b> | Pier 5 and inside perimeter |                 |                |                 |  |

ALAMEDA COUNTY STAGING SITES

|                         |                          |                             |                            |                             |
|-------------------------|--------------------------|-----------------------------|----------------------------|-----------------------------|
| <b>_ Name</b>           | <b>_ Berkeley Marina</b> | <b>_ Crown Beach Reg Pk</b> | <b>_ MLK Regional Park</b> | <b>_ San Leandro Marina</b> |
| <b>_ Address</b>        | <b>_ University Av</b>   | <b>_ Alameda</b>            | <b>_ San Leandro</b>       | <b>_ San Leandro</b>        |
| <b>_</b>                | <b>_ Berkeley, CA</b>    | <b>_</b>                    | <b>_</b>                   | <b>_</b>                    |
| <b>_ Phone #</b>        | <b>_ (510)644-6376</b>   | <b>_ (510)562-1373</b>      | <b>_ (510)521-7090</b>     | <b>_ (510)357-7447</b>      |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Use</b>            | <b>_ Marina</b>          | <b>_ Public Park</b>        | <b>_ Public Park</b>       | <b>_ Marina</b>             |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Size</b>           | <b>_ 50 Acres</b>        | <b>_ 8 acres</b>            | <b>_ 8 acres</b>           | <b>_ 3 acres</b>            |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Storage Area</b>   | <b>_ Yes</b>             | <b>_ No</b>                 | <b>_ No</b>                | <b>_</b>                    |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Running Water</b>  | <b>_ Yes</b>             | <b>_ Yes</b>                | <b>_ Yes</b>               | <b>_ Yes</b>                |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Sewage Hookups</b> | <b>_ Yes</b>             | <b>_ No</b>                 | <b>_ No</b>                | <b>_ Yes</b>                |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Power</b>          | <b>_ Yes</b>             | <b>_ Yes</b>                | <b>_ Yes</b>               | <b>_ Yes</b>                |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Outdoor Lights</b> | <b>_ Yes</b>             | <b>_ Yes</b>                | <b>_ Yes</b>               | <b>_ Yes</b>                |
| <b>_</b>                |                          |                             |                            |                             |
| <b>_ Buildings</b>      | <b>_ Nearby</b>          | <b>_ Nearby</b>             | <b>_ Nearby</b>            | <b>_ Nearby</b>             |
|                         |                          |                             |                            |                             |

ALAMEDA COUNTY STAGING SITES

|                                               |                                     |                                     |                                        |                                             |                          |
|-----------------------------------------------|-------------------------------------|-------------------------------------|----------------------------------------|---------------------------------------------|--------------------------|
| <input type="checkbox"/> <b>Security</b>      | <input type="checkbox"/> No         | <input type="checkbox"/> Yes        | <input type="checkbox"/> Yes           | <input type="checkbox"/>                    | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Nearest Shore</b> | <input type="checkbox"/> Waterfront | <input type="checkbox"/> Beach side | <input type="checkbox"/> Beach side    | <input type="checkbox"/> Waterfront         | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Launch Fac.</b>   | <input type="checkbox"/> Yes        | <input type="checkbox"/> Yes        | <input type="checkbox"/> Yes           | <input type="checkbox"/> Yes                | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Berths</b>        | <input type="checkbox"/> Yes        | <input type="checkbox"/> Nearby     | <input type="checkbox"/> Nearby        | <input type="checkbox"/> Yes                | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Load Limit</b>    | <input type="checkbox"/> 10 tons    | <input type="checkbox"/> 2 tons     | <input type="checkbox"/> 10 tons       | <input type="checkbox"/> 10 tons            | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Additional</b>    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> Fronts on San | <input type="checkbox"/> More space at near | <input type="checkbox"/> |
| <input type="checkbox"/> <b>Information</b>   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> Leandro Bay   | <input type="checkbox"/> Oyster Cove Reg Pk | <input type="checkbox"/> |

CONRA COSTA COUNTY STAGING SITES

| <b>Name</b>           | <b>Antioch Fishing Pr</b>             | <b>Antioch Delta Pier</b>      | <b>Pinole Point Pier</b>           | <b>San Leandro Marina</b> |
|-----------------------|---------------------------------------|--------------------------------|------------------------------------|---------------------------|
| <b>Address</b>        | End of H St East<br>of Antioch Marina | East side of<br>Antioch Bridge | Point Pinole<br>Regional Shoreline | San Leandro               |
| <b>Phone #</b>        | (510)779-6957                         | (510)635-0135                  | (510)635-0135                      | (510)357-7447             |
| <b>Use</b>            | Recreation                            | Recreation                     | Recreation                         | Marina                    |
| <b>Size</b>           |                                       | 5 acres                        | Extensive                          | 3 acres                   |
| <b>Storage Area</b>   | No                                    | Fenced inclosure               | No                                 |                           |
| <b>Running Water</b>  | No                                    | Yes                            | Limited                            | Yes                       |
| <b>Sewage Hookups</b> | No                                    | Minmal                         | No                                 | Yes                       |
| <b>Power</b>          | No                                    | Yes                            | Limited                            | Yes                       |
| <b>Outdoor Lights</b> | Yes                                   | Some                           | Minimal                            | Yes                       |
| <b>Buildings</b>      | No                                    | No                             | Minor                              | Nearby                    |
| <b>Security</b>       | No                                    | No                             | Park Police                        |                           |
| <b>Nearest Shore</b>  | San Joaquin River                     | San Joaquin River              | San Palo Bay                       | Waterfront                |
| <b>Launch Fac.</b>    | Nearby                                | Nearby                         | No                                 | Yes                       |
| <b>Berths</b>         | Limited nearby                        | Nearby                         | No                                 | Yes                       |
| <b>Load Limit</b>     |                                       |                                |                                    | 10 tons                   |



\_ CONTRA COSTA COUNTY STAGING SITES

|                               |                               |                                   |                                   |                                    |                                       |
|-------------------------------|-------------------------------|-----------------------------------|-----------------------------------|------------------------------------|---------------------------------------|
| <b>Additional Information</b> | _                             | _                                 | _                                 | _                                  | More space at near Oyster Cove Reg Pk |
| <b>Name</b>                   | Antioch MUNI Mrina            | Driftwood Marina                  | Lauritzen Marina                  | San Leandro Marina                 |                                       |
| <b>Address</b>                | 5 Marina Plaza<br>Antioch, CA | 6338 Bridgehead Rd<br>Antioch, CA | 115 Lauritzen Lane<br>Antioch, CA | 1340 Marina Way S.<br>Richmond, CA |                                       |
| <b>Phone #</b>                | (510)779-6957                 | (510)757-9449                     | (510)757-1916                     | (510)236-1013                      |                                       |
| <b>Use</b>                    | Marina                        | Marina                            | Marina                            | Marina                             |                                       |
| <b>Size</b>                   |                               | 1 acre                            | 3 acres                           | 3 acres                            |                                       |
| <b>Storage Area</b>           | No                            | Some                              | No                                | Launch Ramp Pking                  |                                       |
| <b>Running Water</b>          | Yes                           | Yes                               | Yes                               | Yes                                |                                       |
| <b>Sewage Hookups</b>         | Yes                           | Yes                               | Yes                               | Yes                                |                                       |
| <b>Power</b>                  | Yes                           | Yes                               | Yes                               | Yes                                |                                       |
| <b>Outdoor Lights</b>         | Yes                           | Yes                               | Some                              | Yes                                |                                       |
| <b>Buildings</b>              | Office                        | Office                            |                                   |                                    |                                       |
| <b>Security</b>               | Gates                         |                                   |                                   |                                    |                                       |
| <b>Nearest Shore</b>          | San Joaquin River             | San Joaquin River                 | San Joaquin River                 | Richard Channel                    |                                       |
| <b>Launch Fac.</b>            | Nearby                        | Nearby                            | Yes                               | Yes                                |                                       |

CONTRA COSTA COUNTY STAGING SITES

|                               |                                             |                                            |                                    |                                    |
|-------------------------------|---------------------------------------------|--------------------------------------------|------------------------------------|------------------------------------|
| <b>Berths</b>                 | 285                                         | 213                                        | 130                                | 758                                |
| <b>Load Limit</b>             | ramp                                        |                                            |                                    |                                    |
| <b>Additional Information</b> |                                             |                                            | Heleopad                           |                                    |
| <b>Name</b>                   | <b>Brickyard Marina</b>                     | <b>Richmond Yacht Clb</b>                  | <b>Pittsburg Marina</b>            | <b>Richmond Port</b>               |
| <b>Address</b>                | 1120 Brickyard<br>Cove Road<br>Richmond, CA | 351 Brickyard<br>Cove Road<br>Richmond, CA | 51 E. Marina Blvd<br>Pittsburg, CA | Terminals 1-4<br>Pt. Potrero Term. |
| <b>Phone #</b>                | (510)236-1993                               | (510)234-6959                              | (510)439-4958                      | (510)439-4958                      |
| <b>Use</b>                    | Marina                                      | Marina                                     | Marina                             | Marina                             |
| <b>Size</b>                   | 1 acre                                      | 3/4 acre                                   | 3 acres                            | Extensive                          |
| <b>Storage Area</b>           | No                                          | No                                         | acre                               | Buildings, enclosr                 |
| <b>Running Water</b>          | No                                          | No                                         | Yes                                | Yes                                |
| <b>Sewage Hookups</b>         | No                                          | No                                         | Limited                            | Yes                                |
| <b>Power</b>                  | No                                          | No                                         | Limited                            | Yes                                |
| <b>Outdoor Lights</b>         | No                                          | No                                         | Yes                                | Yes                                |
| <b>Buildings</b>              | No                                          | No                                         | No                                 | Yes                                |
| <b>Security</b>               | No                                          | No                                         | No                                 | Variable                           |

CONTRA COSTA COUNTY STAGING SITES

|                               |                                                 |                                     |                                          |                                          |                          |
|-------------------------------|-------------------------------------------------|-------------------------------------|------------------------------------------|------------------------------------------|--------------------------|
| <b>Nearest Shore</b>          | <input type="checkbox"/>                        | <input type="checkbox"/>            | <input type="checkbox"/> New York Slough | <input type="checkbox"/> Richard Channel | <input type="checkbox"/> |
| <b>Launch Fac.</b>            | <input type="checkbox"/> No                     | <input type="checkbox"/> No         | <input type="checkbox"/> Yes             | <input type="checkbox"/> Nearby          | <input type="checkbox"/> |
| <b>Berths</b>                 | <input type="checkbox"/> 250                    | <input type="checkbox"/> 250        | <input type="checkbox"/> 718             | <input type="checkbox"/> Nearby          | <input type="checkbox"/> |
| <b>Load Limit</b>             | <input type="checkbox"/> 3 ton hoist            | <input type="checkbox"/> hoist only | <input type="checkbox"/> 30 ton          | <input type="checkbox"/> N/A             | <input type="checkbox"/> |
| <b>Additional Information</b> | <input type="checkbox"/>                        | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
| <b>Name</b>                   | <input type="checkbox"/> <b>Martinez Marina</b> | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
| <b>Address</b>                | <input type="checkbox"/> 7 North Court St       | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
|                               | <input type="checkbox"/> Martinez, CA           | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
|                               | <input type="checkbox"/>                        | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
| <b>Phone #</b>                | <input type="checkbox"/> 510-313-0942           | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |
| <b>Use</b>                    | <input type="checkbox"/> Marina                 | <input type="checkbox"/>            | <input type="checkbox"/>                 | <input type="checkbox"/>                 | <input type="checkbox"/> |

F - 99-SFB

CONTRA COSTA COUNTY STAGING SITES

|                         |                           |          |          |          |          |
|-------------------------|---------------------------|----------|----------|----------|----------|
| <b>Size</b>             | <b>_ 30 Acres</b>         | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Storage Area</b>   | <b>_ No</b>               | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Running Water</b>  | <b>_ Yes</b>              | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Sewage Hookups</b> | <b>_ Yes</b>              | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Power</b>          | <b>_ Yes</b>              | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Outdoor Lights</b> | <b>_ Yes</b>              | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Buildings</b>      | <b>_</b>                  | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Security</b>       | <b>_</b>                  | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Nearest Shore</b>  | <b>_ Carquinez Strait</b> | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Launch Fac.</b>    | <b>_ Large</b>            | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |
| <b>_ Berths</b>         | <b>_ 428</b>              | <b>_</b> | <b>_</b> | <b>_</b> | <b>_</b> |

CONTRA COSTA COUNTY STAGING SITES

|                           |                        |                              |                           |                           |
|---------------------------|------------------------|------------------------------|---------------------------|---------------------------|
| <div>—</div> <div>—</div> | <div>Load Limit</div>  | <div>—</div> <div>—</div>    | <div>—</div> <div>—</div> | <div>—</div> <div>—</div> |
| <div>—</div> <div>—</div> | <div>Additional</div>  | <div>Primary Staging</div>   | <div>—</div> <div>—</div> | <div>—</div> <div>—</div> |
| <div>—</div> <div>—</div> | <div>Information</div> | <div>site for Cleanbay</div> | <div>—</div> <div>—</div> | <div>—</div> <div>—</div> |

# AIRCRAFT LANDING SITES

| CITY                  | NAME OF LOCATION             | ADDRESS                 | C-130 | PHONE     |
|-----------------------|------------------------------|-------------------------|-------|-----------|
| Alameda<br>3300       | NAS Alameda                  | ATC Fac., 1601 1st Ave  | X     | (510)263- |
| Fairfield<br>5517     | Travis Air Force Base        | Bldg 31, Flight Line Rd | X     | (707)424- |
| Half Moon Bay<br>3701 | Half Moon Bay Airport        | Box 46, Route 1         | X     | (415)573- |
| Hayward<br>8678       | Hayward Airport              | 20301 Skywest Brice     | X     | (510)293- |
| Monterey<br>7004      | Monterey Peninsula Airport   | Olmsted Rd              | X     | (408)648- |
| Mountain View<br>5859 | Moffet Field                 | Ops ATC NAS Moffet      | X     | (415)404- |
| Napa<br>4300          | Napa County Airport          | 2030 Airport Road       |       | (707)253- |
| Navato<br>2331        | Hamilton Field               | Ignacio Blvd            | X     | (415)883- |
| Navato<br>1754        | Marin Co Airport, Gness Fld  | 351A Airport Rd         | X     | (415)897- |
| Oakland<br>4000       | Oakland Int'l Airport        | 1 Airport Drive         | X     | (510)577- |
| Palo Alto<br>7833     | Palo Alto Airport            | 1925 Embarcadero Rd     | X     | (415)856- |
| Petaluma<br>8441      | Petaluma Pilot Assoc Airport | 2210 East Washington St |       | (707)778- |
| Rio Vista<br>5628     | Rio Vista Airport            | 2000 Airport Rd         |       | (707)374- |

# AIRCRAFT LANDING SITES

|                           |                               |                           |     |             |
|---------------------------|-------------------------------|---------------------------|-----|-------------|
| _ San Carlos<br>3700 _    | _ San Carlos Airport          | _ 620 Airport Dr          | _   | _ (415)573- |
| _ San Francisco<br>2222 _ | _ San Francisco Int'l Airport | _ San Francisco, CA 94128 | _ X | _ (415)876- |
| _ San Jose<br>4705 _      | _ San Jose Int'l Airport      | _ Airport Parkway         | _ X | _ (408)277- |
| _ San Rafael<br>0140 _    | _ Marin Ranch Airport         | _ Smith Ranch Rd          | _   | _ (415)492- |
| _ Santa Rosa<br>4602 _    | _ Sonoma County Airport       | _ 2200 Airport Road       | _   | _ (707)433- |
| _ Vacaville<br>0304 _     | _ Nut Tree Airport            | _ 300 County Airport Rd   | _ X | _ (707)446- |

## SFB &amp; DELTA FUEL DOCKS

| <b>CITY</b>        | <b>NAME OF LOCATION</b>   | <b>ADDRESS</b>             | <b>PHONE</b>    |       |
|--------------------|---------------------------|----------------------------|-----------------|-------|
| <b>_DSL_GAS_</b>   |                           |                            |                 |       |
| _ Alameda<br>R _   | _Ballena Isle Marina      | _ 1150 Ballena Blvd        | _ (510)523-5528 | _ X _ |
| _                  | _Grand Marina             | _ 2099 Grand St            | _ (510)521-FUEL | _ X _ |
| R _                |                           |                            |                 |       |
| _                  | _Marina Village           | _ 1050 Marina Village Pkwy | _ (510)521-0905 | _ X _ |
| R _                |                           |                            |                 |       |
| _ Antioch<br>R _   | _Antioch Municipal Marina | _ 5 Marina Plaza           | _ (510)754-1668 | _ X _ |
| _                  | _Driftwood Marina         | _ 6338 Bridgehead Road     | _ (510)757-9449 | _ _   |
| R _                |                           |                            |                 |       |
| _                  | _New Bridge Marina        | _ Route 1, Box 524         | _ (510)757-1500 | _ X _ |
| R _                |                           |                            |                 |       |
| _ Benicia<br>R _   | _Benicia Marina           | _ 266 East 'B' St          | _ (707)745-0100 | _ X _ |
| _ Berkeley<br>R _  | _Berkeley Marina          | _ 201 University Ave       | _ (510)843-8195 | _ X _ |
| _ Brentwood<br>R _ | _Cruiser Haven Marina     | _ Route 1, Box 99A         | _ (510)634-3822 | _ _   |
| _                  | _Holland Riverside Marina | _ Route 1, Box 300         | _ (510)684-3667 | _     |
| _R,P_              |                           |                            |                 |       |



SFB & D FUEL DOCKS

|                        |                                 |                            |                 |       |
|------------------------|---------------------------------|----------------------------|-----------------|-------|
| _ Byron<br>_R,P_       | _Discovery Bay Yacht Harbor     | _ 5901 Marina Road         | _ (510)634-5928 | _ X   |
| _ Crockett<br>_        | _Crockett Marine Service, Inc._ | _ Foot of Port Street      | _ (510)787-1049 | _ X _ |
| _ Emeryville<br>R _    | _Emeryville City Marina         | _ 3310 powell St           | _ (510)654-6040 | _ X _ |
| _ Isleton<br>_R,P_     | _Willow Berm Marina             | _ 140 Brannan Island Road  | _ (916)777-6313 | _ X   |
| _ Oakland<br>R _       | _Jack London Marina             | _ 54 Jack London Square    | _ (510)452-2563 | _ X _ |
| _ Martinez<br>R _      | _Martinez Marina                | _ 7 North Court St         | _ (510)372-3585 | _ X _ |
| _ Novato<br>R _        | _Port Sonoma-Marin              | _ 270 Sears Point Road     | _ (707)763-9296 | _ X _ |
| _ Pittsburg<br>R _     | _Pittsburg Municipal Marina     | _ 51 East Marina Blvd      | _ (510)439-4958 | _ X _ |
| _ Rio Vista<br>R _     | _Outrigger Marina               | _ 17641 Sherman Island Lv. | _ (916)777-6480 | _ _   |
| _ Sacramento<br>R _    | _Sacramento Marina              | _ 2710 Ramp Way            | _ (916)264-7133 | _ _   |
| _ San Francisco<br>R _ | _San Francisco Marina           | _ 3950 Scott Street        | _ (415)567-8880 | _ X _ |
| _ San Leandro<br>R _   | _San Leandro Marina             | _ 40 San Leandro Marina    | _ (510)357-SHIP | _ X _ |

SFB & D FUEL DOCKS

|                          |                             |                            |                 |       |
|--------------------------|-----------------------------|----------------------------|-----------------|-------|
| _ San Mateo<br>R _       | _Coyote Point Marina        | _ 1900 Coyote Point Drive  | _ (415)342-2838 | _ X _ |
| _ San Rafael<br>R _      | _Loch Lomond Marina         | _ 110 Loch Lomond Drive    | _ (415)454-7228 | _ X _ |
| _ Sausalito<br>R _       | _Clipper Yacht Harbor       | _ 310 Harbor Drive         | _ (415)332-3500 | _ X _ |
| _So San Francisco<br>R _ | _Oyster Point Marina        | _ 911 Marina Drive         | _ (415)873-2500 | _ X _ |
| _ Stockton<br>R _        | _Herman & Helen's Marina    | _ Venise Island Ferry      | _ (209)951-4634 | _ X _ |
| _<br>U _                 | _Stephens Anchorage         | _ 4545 West March Lane     | _ (209)951-4144 | _ X _ |
| _<br>_R,P_               | _Tiki Lagun Resort & Marina | _ 12988 West McDonald Road | _ (209)941-8975 | _ X   |
| _<br>R _                 | _Village West Marina        | _ 6649 Embarcadero Drive   | _ (209)951-1551 | _ X _ |
| _<br>R _                 | _Waterfront Yacht Harbor    | _ 333 Tuleburg Levee       | _ (209)943-1848 | _ X _ |
| _ Vallejo<br>R _         | _Glen Cove Marina           | _ 2000 Glen Cove Marina Rd | _ (707)552-3236 | _ X _ |
| _<br>U _                 | _Vallejo Municipal Marina   | _ 7 Harbor Way             | _ (707)648-4370 | _ X _ |

R = Regular  
P = Premium  
U = Unleaded

SFB & DELTA MAINTENANCE FACILITIES

| CITY      | NAME OF LOCATION              | ADDRESS               | PHONE         |
|-----------|-------------------------------|-----------------------|---------------|
| Alameda   | Alameda Marina                | 1815 Clement Ave      | (510)521-1133 |
|           | Ballena Isle Marina           | 1150 Ballena Blvd     | (510)523-5528 |
|           | Grand Marina                  | 2099 Grand St         | (510)865-1200 |
| Antioch   | New Bridge Marina             | Route 1, Box 524      | (510)757-1500 |
| Benicia   | Benicia Marina                | 266 East 'B' St       | (707)745-2628 |
| Berkeley  | Berkeley Marina               | 201 University Ave    | (510)644-6376 |
| Brentwood | Holland Riverside Marina      | Route 1, Box 300      | (510)684-3667 |
| Byron     | Discovery Bay Yacht Harbor    | 5901 Marina Road      | (510)634-5928 |
| Crockett  | Crockett Marine Service, Inc. | Foot of Port Street   | (510)787-1049 |
| Oakland   | Embarcadero Cove Marina       | 1855 Embarcadero West | (510)272-1586 |

SFB & DELTA MAINTENANCE FACILITIES

|   |                |                              |   |                         |   |               |
|---|----------------|------------------------------|---|-------------------------|---|---------------|
| _ | _              | Jack London Marina           | _ | 54 Jack London Square   | _ | (510)272-1586 |
| _ |                |                              |   |                         |   |               |
| _ | Martinez       | Martinez Marina              | _ | 7 North Court St        | _ | (510)372-3585 |
| _ |                |                              |   |                         |   |               |
| _ | Novato         | Port Sonoma-Marin            | _ | 270 Sears Point Road    | _ | (707)778-8055 |
| _ |                |                              |   |                         |   |               |
| _ | Petaluma       | Petaluma River Turning Basin | _ | 215 Howard Street       | _ | (707)762-2785 |
| _ |                |                              |   |                         |   |               |
| _ | Point Richmond | Richmond Yacht Club          | _ | 351 Brickyard Cove Road | _ | (510)234-6959 |
| _ |                |                              |   |                         |   |               |
| _ | Pittsburg      | Pittsburg Municipal Marina   | _ | 51 East Marina Blvd     | _ | (510)439-4958 |
| _ |                |                              |   |                         |   |               |
| _ | Redwood City   | Pete's Harbor                | _ | #1 Uccelli Blvd         | _ | (415)366-0922 |
| _ |                |                              |   |                         |   |               |
| _ | Point Richmond | Richmond Yacht Club          | _ | 351 Brickyard Cove Road | _ | (510)234-6959 |
| _ |                |                              |   |                         |   |               |
| _ | Sacramento     | River Bank Marina            | _ | 1401 Garden Highway     | _ | (916)922-0716 |
| _ |                |                              |   |                         |   |               |
| _ | San Leandro    | San Leandro Marina           | _ | 40 San Leandro Marina   | _ | (800)559-SAIL |
| _ |                |                              |   |                         |   |               |
| _ | San Rafael     | Loch Lomond Marina           | _ | 110 Loch Lomond Marina  | _ | (415)454-7228 |
| _ |                |                              |   |                         |   |               |

SFB & DELTA MAINTENANCE FACILITIES

|                      |                              |                            |                 |
|----------------------|------------------------------|----------------------------|-----------------|
| —                    | — Lowries Yacht Harbor       | — 40 Point San Pedro Road  | — (415)454-7595 |
| —                    |                              |                            |                 |
| — Sausalito          | — Clipper Yacht Harbor       | — 310 Harbor Drive         | — (415)332-3500 |
| —                    |                              |                            |                 |
| — South San Francico | — Oyster Point Marina        | — 911 Marina Drive         | — (415)952-0808 |
| —                    |                              |                            |                 |
| — Stockton           | — Herman & Helen's Marina    | — Venise Island Ferry      | — (209)951-4634 |
| —                    |                              |                            |                 |
| —                    | — Stephens Anchorage         | — 4545 West March Lane     | — (209)951-4144 |
| —                    |                              |                            |                 |
| —                    | — Tiki Lagun Resort & Marina | — 12988 West McDonald Road | — (209)941-8975 |
| —                    |                              |                            |                 |
| —                    | — Village West Marina        | — 6649 Embarcadero Drive   | — (209)951-1551 |
| —                    |                              |                            |                 |
| — Vallejo            | — Vallejo Municipal Marina   | — 7 Harbor Way             | — (707)648-4370 |
| —                    |                              |                            |                 |
| — Walnut Grove       | — Deckhand's Marine Supply   | — 14090 Highway 160        | — (916)776-1370 |
| —                    |                              |                            |                 |

SFB & DELTA PORTABLE TOILET COMPANIES

During an oil spill the need for portable toilets is critical. There are too many companies to include all of them in the plan. The list below covers most of the more common portable toilet suppliers in the Bay Area. Additional companies may be found in the phone book.

PORTABLE TOILET COMPANIES

| NAME                               | PHONE NUMBERS  |   |
|------------------------------------|----------------|---|
| A-1 Enterprises                    | 1-800-222-4050 | - |
| A-1 Sanitation                     | 1-800-282-8988 | - |
| M & M Sanitation Company           | 1-800-675-0025 | - |
| Norcal Preconstruction System      | 1-800-541-5863 | - |
| Port-o-let                         | 1-800-243-0291 | - |
| United Services BFI Services Group | 1-800-262-2995 | - |
| WMI Services                       | 1-800-442-5606 | - |

## SFB &amp; DELTA BOAT RAMPS

| CITY               | NAME OF LOCATION           | ADDRESS              | PHONE     |
|--------------------|----------------------------|----------------------|-----------|
| Alameda<br>1133    | Alameda Marina             | 1815 Clement Ave     | (510)521- |
|                    | Grand Marina               | 2099 Grand St        | (510)865- |
| Antioch<br>1668    | Antioch Municipal Marina   | 5 Marina Plaza       | (510)754- |
|                    | Driftwood Marina           | 6338 Bridgehead Road | (510)757- |
|                    | New Bridge Marina          | Route 1, Box 524     | (510)757- |
| Benicia<br>2628    | Benicia Marina             | 266 East 'B' St      | (707)745- |
| Berkeley<br>6376   | Berkeley Marina            | 201 University Ave   | (510)644- |
| Brentwood<br>3667  | Holland Riverside Marina   | Route 1, Box 300     | (510)684- |
| Byron<br>5928      | Discovery Bay Yacht Harbor | 5901 Marina Road     | (510)634- |
| Emeryville<br>0505 | Emery Cove Marina          | 3300 Powell Street   | (510)428- |

SFB & DELTA BOAT RAMPS

|                |                                 |                              |             |
|----------------|---------------------------------|------------------------------|-------------|
| _              | _ Emeryville City Marina        | _ 3310 Powell Street         | _ (510)596- |
| 4300 _         |                                 |                              |             |
| _ Oakland      | _ Embarcadero Cove Marina       | _ 1855 Embarcadero West      | _ (510)272- |
| 1586 _         |                                 |                              |             |
| _              | _ Jack London Marina            | _ 54 Jack London Square      | _ (510)272- |
| 1586 _         |                                 |                              |             |
| _ Martinez     | _ Martinez Marina               | _ 7 North Court St           | _ (510)372- |
| 3585 _         |                                 |                              |             |
| _ Novato       | _ Port Sonoma-Marin             | _ 270 Sears Point Road       | _ (707)778- |
| 8055 _         |                                 |                              |             |
| _ Petaluma     | _ Petaluma River Turning Basin  | _ 215 Howard Street          | _ (707)762- |
| 2785 _         |                                 |                              |             |
| _ Pittsburg    | _ Pittsburg Municipal Marina    | _ 51 East Marina Blvd        | _ (510)439- |
| 4958 _         |                                 |                              |             |
| _ Redwood City | _ Redwood City Yacht Harbor     | _ 451 Seaport Court          | _ (415)306- |
| 4150 _         |                                 |                              |             |
| _ Richmond     | _ Richmond Marina Bay Municipal | _ 1340 Marina Way South      | _ (510)236- |
| 1013 _         |                                 |                              |             |
| _ Rio Vista    | _ Outrigger Marina              | _ 17641 Sherman Island Levee | _ (916)777- |
| 6480 _         |                                 |                              |             |
| _ Sacramento   | _ Sacramento Marina             | _ 2710 Ramp Way              | _ (916)265- |
| 5712 _         |                                 |                              |             |



SFB & DELTA BOAT RAMPS

|                                |                              |                             |             |
|--------------------------------|------------------------------|-----------------------------|-------------|
| _ San Leandro<br>SAIL _        | _ San Leandro Marina         | _ 40 San Leandro Marina     | _ (800)559- |
| _ San Mateo<br>2594 _          | _ Coyote Point Marina        | _ 1900 Coyote Point Drive   | _ (415)573- |
| _ San Rafael<br>7228 _         | _ Loch Lomond Marina         | _ 110 Loch Lomond Marina    | _ (415)454- |
| _ Sausalito<br>3500 _          | _ Clipper Yacht Harbor       | _ 310 Harbor Drive          | _ (415)332- |
| _<br>2319 _                    | _ Horshoe Bay Harbor         | _ Presidio of San Francisco | _ (415)332- |
| _ South San Francico<br>0808 _ | _ Oyster Point Marina        | _ 911 Marina Drive          | _ (415)952- |
| _ Stockton<br>4634 _           | _ Herman & Helen's Marina    | _ Venise Island Ferry       | _ (209)951- |
| _<br>4144 _                    | _ Stephens Anchorage         | _ 4545 West March Lane      | _ (209)951- |
| _<br>8975 _                    | _ Tiki Lagun Resort & Marina | _ 12988 West McDonald Road  | _ (209)941- |

## **TAB B PERSONNEL**

### SFB & DELTA LODGING FACILITIES:

Hotels and motels can be utilized for accomodating emergency response personnel. Facilities in the proximity to the staging areas would be preferable. There are too many hotels and motels in the San Francisco Bay Area to list in their entirety. Below is a list of some of the more common chains of hotels and motels to choose from. In addition, the American Red Cross can set up shelters, providing cots and food for response personnel. The number to call is (415)202-0600. It is recommended contacting a travel agency to assist with travel and accommodations.

### HOTELS & MOTELS

| <b>NAME</b>    | <b>PHONE NUMBERS</b> |
|----------------|----------------------|
| Best Western   | 1-800-528-1234       |
| Hilton         | 1-800-445-8667       |
| Holiday Inn    | 1-800-465-4329       |
| Howard Johnson | 1-800-654-2000       |
| Hyatt          | 1-800-233-1234       |
| Marriot        | 1-800-228-9290       |
| Radisson       | 1-800-333-3333       |
| Ramada         | 1-800-228-2828       |
| Red Lion       | 1-800-547-8010       |
| Sheraton       | 1-800-325-3535       |
| Travelodge     | 1-800-255-3050       |

MILITARY BOQ's/BEQ's

| NAME                              | PHONE NUMBERS                 |
|-----------------------------------|-------------------------------|
| Naval Air Station Alameda BOQ/BEQ | (510)263-3649 / (510)263-3673 |
| NAVSTA Treasure Island BOQ/BEQ    | (415)395-5271 / (415)395-5407 |
| Travis Air Force Base BOQ & BEQ   | (707)437-0700                 |
| Oakland Army Base BEQ             | (510)466-3111                 |

## 2. Transportation

For incoming personnel in the case of an oil spill vehicles will be in demand. All the airports that personnel will fly into have at least one car rental agency on or near the airport. For further transportation needs consult the telephone book.

## 3. Food - 4. Clothing - 5. Safety Equipment

Food, clothing, and safety equipment will be handled by the responsible party. For Coast Guard personnel, uniform items may be purchased at the exchange on Coast Guard Island or at TRACEN Petaluma. Safety equipment that all personnel should have are at a minimum coveralls, eye protection, rubber gloves, boots, and a hard hat. These items may be found using the yellow pages.

## **TAB C COMMUNICATIONS**

### **SFB & DELTA COMMUNICATIONS**

The following is a list of some of the major communications equipment companies located in the San Francisco Bay Area. There are too many to list them in their entirety. For more information on communications see Annex J, Tab K or Annex F, Tabs A-C to see a specific organization's communication package.

#### **COMMUNICATIONS EQUIPMENT COMPANIES**

| <b>NAME</b>                      | <b>PHONE NUMBERS</b> |
|----------------------------------|----------------------|
| Bay Communications               | (510)527-6600        |
| Cellular One                     | (800)424-1999        |
| COMTECH Mobile Telephone Company | (800)745-0255        |
| GTE Mobile Net                   | (800)424-3636        |

## **TAB D COMMAND CENTER**

This section shall identify State authorities and procedures to authorize disposal actions and exemptions.

### **COMMAND CENTER**

When a significant sized spill occurs, the response organization described in Annex B of this plan will be established. In order to effectively manage the containment and clean up efforts, the response organization will require the activation of a command center. This appendix will address the potential needs of a command center, including the staffing, equipment and size requirements for State and Coast Guard personnel. Facility and vessel owner/operators will need to add in their own numbers of people and equipment.

The information provided was created by a joint working group of State and Coast Guard personnel. The two examples are to be used as guidelines only for companies that will be the Responsible Party during a spill. The consensus of the working group was that each and every spill will be different and, as such, the response organization's size and needs will vary accordingly. For any two spills of the same amount and type of product, factors such as weather, location of the spill, the time of day/season of the spill, etc., will vary the way a response proceeds and also the size and location of the command center.

#### **Command Center at a Facility**

Generally, for spills at facilities, or in the Bay by vessels associated with local companies, the command center will most likely be located at the facility. In an effort to better prepare facility operators as to what will be expected of a command center, the following guidelines for space and equipment are estimates a facility spill of 30,000 gallons. Each facility operator should review their command center plans and compare them for adequacy against this information. However, as stated above, these numbers are approximates due to the varying nature of each spill. As part of the facility plan review process by the OSPR, the adequacy of facility command posts will be evaluated.

- a. Two work areas. Each should be at least 15' x 15'. One would contain the Planning and Operations Section. It should have four large tables with chairs for 8 - 15 people. It would also need four telephones, one fax machine, one copy machine, and three large dry erase boards. The second work area would be for the Logistics and Finance Section. It will need two - three large tables with chairs for 8 - 10 people, three telephones, one fax machine, and two large dry erase boards.
- b. An office for the Incident Commander(s). A regular sized office with a table and chairs for three - four people would be sufficient. It should have at least one telephone.
- c. A Public Information Specialist work area. A large office space for 2 people equipped with one large table with chairs, two telephones, one fax machine, and one copier.

The totals for the above breakdown:

- a. 21 to 31 people.
- b. 7 to 8 large tables with an appropriate amount of chairs.

- c. 13 phone lines, with three dedicated for fax machines.
- d. 10 telephones, three fax machines and two copiers.
- e. 5 large dry erase boards.
- f. A sufficient power supply, power outlets, and extension cords to accommodate up to 30 electrical devices (computers, fax machines, printers, etc.)
- g. Work areas need to have sufficient lighting, heating/cooling, and ventilation. Food and drink should be readily available. There should also be restroom facilities for men and women.

#### Command Center at a Non-Facility Location

For spills in the Bay by vessels not associated with local companies, a quick decision concerning the location of the command center will need to be made. The following possibilities are listed to give a responsible party basic information they can act upon immediately. This plan in no way recommends one particular location over another. As other locations become known, they will be added to this appendix.

One possible location is the Port of Oakland's main building, located at 530 Water Street in Oakland's Jack London Square. The contact person for the Port is Coleen A. Bell and she can be reached at (510) 272-1537. Other possible sites may be obtained through the Oakland Convention and Visitor's Bureau, 1000 Broadway, Suite 200, Oakland, CA 94607. This organization has access to dozens of hotels in and around the Oakland area. Their personnel can locate a space, if any are available, and make the necessary arrangements. The point of contact is the Sales Manager, at (510) 839-9000 (voice mail number (510) 286-8712).

A possible future site is located at the Mare Island Navy Base. The site was proposed by the California Maritime Academy to the State and City of Vallejo as a training facility/command center location. By March 1995 the Navy will have left the base and a large training building will be available. With some modifications it would become a permanent site for a command center. Funding for the construction is still a large issue and no decision by the City of Vallejo and the State has been made yet.

For vessel owners/operators who would be the Responsible Party during a spill, State and Coast Guard personnel brainstormed ideas for the space and equipment needed for a command center for a theoretical worst case spill in the Bay. Each vessel owner/ operator should review the following information and use it as an example of the expected requirements. Again, these numbers are approximates due to the varying nature of each spill.

Recommendations for the space needed are as follows:

- a. Five working areas. The total area should be about 2500 FT<sup>2</sup>. This area should be divided by partitions, curtains, etc.
- b. An OSC section. This would be in addition to the five work areas and should be a separate room or at least be able to be closed off from the work areas to allow closed discussions between Federal, State and RP Incident Commanders. A normal sized room would be sufficient.

- c. Briefing Area. An area set aside for internal briefings, not press briefings. A room of about 400 FT<sup>2</sup> would be needed.
- d. Public Information Area. A space for media specialists to work. A normal sized room should be sufficient.
- e. Volunteer Screening Area. Space for personnel to handle non-press type inquiries for information and how to volunteer. A normal sized room should be sufficient.
- f. Communications Area. Space for communications personnel to set up radios, telephones, etc. Will also be used as a dispatch center for equipment and personnel. An area of about 400 to 500 FT<sup>2</sup>.
- g. GIS Area. Should be included within the Planning Section. An additional 80 to 100 FT<sup>2</sup>.

Recommendations for the equipment needed plus the number of people that would theoretically occupy the designated work sections are as follows:

- a. OSC Section: Two large tables with sufficient chairs for five - seven people. Five telephones and three large dry erase boards.
- b. Briefing area: One TV/VCR combination unit, one slide projector, one overhead projector, one screen for the projection images, one public address system, and chairs for 15 - 20 people.
- c. Command Staff: Four large tables with sufficient chairs for 15 - 20 people. Six telephones, one fax machine, and two large dry erase boards.
- d. Planning Section: Four - six large tables with sufficient chairs for 15 - 20 people. Six telephones, one fax machine, and three large dry erase boards.
- e. Operations Section: Six - eight large tables with sufficient chairs for 30 - 40 people. Six telephones, one fax machine, and four large dry erase boards.
- f. Logistics Section: Two - three large tables with sufficient chairs for 20 - 25 people. Five telephones, one fax machine, and two large dry erase boards.
- g. Finance Section: Two large tables with sufficient chairs for 10 - 15 people. Five telephones, one fax machine, and one large dry erase board.
- h. Public Information Area. Two - four large tables with sufficient chairs for 10 people. Five telephones, two fax machines, and a large volume copy machine.
- e. Volunteer Screening Area. One large table with sufficient chairs for 3 - 5 people. Five telephones, one fax machine, and one large dry erase board.
- f. Communications Area. Two - four large tables with sufficient chairs for 10 people. Three telephones and two large dry erase boards.



The totals for the above breakdown are:

- a. 118 to 152 people.
- b. All work areas need to have sufficient lighting, heating/cooling, and ventilation.
- c. 23 to 32 large tables with an appropriate amount of chairs.
- d. Enough partitions to create a minimum of five separate working areas.
- e. Approximately 54 phone lines, with eight dedicated for fax machines.
- f. Approximately 46 telephones with lights (if possible) as well as ringers that allow personnel to see that a call is coming in to reduce the noise level.
- g. Eight fax machines.
- h. One public address system.
- i. 18 large dry erase boards.
- j. A sufficient power supply, power outlets, and extension cords to accommodate up to 100 electrical devices (computers, fax machines, printers, etc.)
- k. At least three copiers.
- l. One slide and one overhead projection machine, plus a screen to display images on.
- m. A media briefing area is also needed. Ideally, this area would be outside the command center building or at least physically separated from the other working areas.

The place selected for the Command Post should be easily accessible from anywhere in the Bay area and have plenty of parking. Ideally, it will have sufficient restroom facilities for men and women. Food and drink should also be readily available.

For lesser spills the above numbers can always be scaled down. Some of the fax machines may/could be supplied by the State or Coast Guard. It is assumed that each organization will bring their own computers and printers.

Following is a list of County Emergency Management contacts. They are initial contacts for OES OPCEN use or suggestions for Command Posts in their county's area of responsibility.

|                                                            |                                                      |                                                         |
|------------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|
| ALAMEDA                                                    | NAPA                                                 | SANTA CLARA                                             |
| Terry Gitlin<br>Fax (510)667-7728<br>ph (510)667-7740      | John Volpi<br>Fax (707)253-4176<br>ph (707)253-4421  | Bob Fields<br>Fax (408)294-4851<br>ph (408)299-3751     |
| CONTRA COSTA                                               | MARIN                                                | SAN FRANCISCO                                           |
| Barbra Cimino<br>Fax (510)646-1120<br>ph (510)646-4461     | Ken Froberg<br>Fax (415)499-7450<br>ph (415)499-6384 | Carl Hedleston<br>Fax (415)431-7500<br>ph (415)558-2703 |
| SOLANO                                                     | SAN MATEO                                            | SONOMA                                                  |
| Birgitta Corsello<br>Fax (707)421-6383<br>ph (707)421-7900 | Carol Hurst<br>Fax (415)363-1868<br>ph (415)363-4790 | Fire Dept<br>Fax (707)526-5555<br>ph (707)527-2361      |
| SANTA CRUZ                                                 |                                                      |                                                         |
| Nancy Gordon<br>Fax (408)454-2909<br>ph (408)454-2900      |                                                      |                                                         |

**Section Law Enforcement Agencies**

**Area/Zone 1**

**Organization Alameda Police Department**

**Address 1555 Oak Street**

**City Alameda State CA Zip**

**Phone # 510-748-4508 Fax**

**Emergency Number**

**Radio Frequencies**

**Resources Section Law Enforcement**  
**Agencies Area/Zone 1**

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**Organization Alameda Sheriff's Department**

**Address 1225 Fallon Street, Room 103**

**City Oakland State CA Zip 94612**

**Phone # 510-272-6878 Fax**

**Emergency Number**

**Radio Frequencies**

**Resources Section Law Enforcement**  
**Agencies Area/Zone 1**

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**Organization Alameda Sheriff's Department, OES**

**Address 2000 150th Avenue**

**City San Leandro State CA Zip 94578-1369**

**Phone # 510-667-7740 Fax 510-667-7728**

**Emergency Number 510-667-7721**

**Radio Frequencies**

**Resources General Information: 510-667-**  
**7713Section Law Enforcement Agencies Area/**  
**Zone 1**

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**Organization Albany Police Department**

**Address 1000 San Pablo Ave.**

**City Albany State CA Zip 94706**

**Phone # 510-525-7300**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---

**Organization Antioch Police Department**

**Address 301 West 10th Street**

**City Antioch State CA Zip 94509**

**Phone # 510-757-2236**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---

**Organization Atherton Police Department**

**Address 83 Ashfield Road**

**City Atherton State CA Zip 94025**

**Phone # 415-323-8471**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---

|                          |                           |              |           |            |              |
|--------------------------|---------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>800 Madison Street</b> |              |           |            |              |
| <b>City</b>              | <b>Oakland</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94607</b> |
| <b>Phone #</b>           | <b>510-464-7010</b>       | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                           |              |           |            |              |
| <b>Radio Frequencies</b> |                           |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**     **Belmont Police Department**

|                          |                         |              |           |            |              |
|--------------------------|-------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1215 Ralston Ave</b> |              |           |            |              |
| <b>City</b>              | <b>Belmont</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94002</b> |
| <b>Phone #</b>           | <b>415-595-7400</b>     | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                         |              |           |            |              |
| <b>Radio Frequencies</b> |                         |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization** Belvedere Police Department

|                          |                            |              |           |            |              |
|--------------------------|----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>450 San Rafael Ave.</b> |              |           |            |              |
| <b>City</b>              | <b>Belvedere</b>           | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94920</b> |
| <b>Phone #</b>           | <b>415-435-2611</b>        | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                            |              |           |            |              |
| <b>Radio Frequencies</b> |                            |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

|                          |                            |  |              |                |                        |              |
|--------------------------|----------------------------|--|--------------|----------------|------------------------|--------------|
| <b>Address</b>           | <b>200 East “L” Street</b> |  | <b>State</b> | <b>CA</b>      | <b>Zip</b>             | <b>94510</b> |
| <b>City</b>              | <b>Benicia</b>             |  |              |                |                        |              |
| <b>Phone #</b>           | <b>707-745-3412</b>        |  | <b>Fax</b>   |                |                        |              |
| <b>Emergency Number</b>  |                            |  |              |                |                        |              |
| <b>Radio Frequencies</b> |                            |  |              |                |                        |              |
| <b>Resources</b>         |                            |  |              | <b>Section</b> | <b>Law Enforcement</b> |              |
| <b>Agencies</b>          | <b>Area/Zone</b>           |  |              | <b>1</b>       |                        |              |

|                          |                          |  |              |                |                        |              |
|--------------------------|--------------------------|--|--------------|----------------|------------------------|--------------|
| <b>Address</b>           | <b>2171 McKinley Ave</b> |  | <b>State</b> | <b>CA</b>      | <b>Zip</b>             | <b>94703</b> |
| <b>City</b>              | <b>Berkeley</b>          |  |              |                |                        |              |
| <b>Phone #</b>           | <b>510-644-6568</b>      |  | <b>Fax</b>   |                |                        |              |
| <b>Emergency Number</b>  |                          |  |              |                |                        |              |
| <b>Radio Frequencies</b> |                          |  |              |                |                        |              |
| <b>Resources</b>         |                          |  |              | <b>Section</b> | <b>Law Enforcement</b> |              |
| <b>Agencies</b>          | <b>Area/Zone</b>         |  |              | <b>2</b>       |                        |              |

|                          |                            |              |                |            |                        |
|--------------------------|----------------------------|--------------|----------------|------------|------------------------|
| <b>Address</b>           | <b>500 Chestnut Street</b> | <b>State</b> | <b>CA</b>      | <b>Zip</b> | <b>94513</b>           |
| <b>City</b>              | <b>Brentwood</b>           |              |                |            |                        |
| <b>Phone #</b>           | <b>415-634-6191</b>        | <b>Fax</b>   |                |            |                        |
| <b>Emergency Number</b>  |                            |              |                |            |                        |
| <b>Radio Frequencies</b> |                            |              |                |            |                        |
| <b>Resources</b>         |                            |              | <b>Section</b> |            | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>           |              | <b>1</b>       |            |                        |

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>150 North Hill #3</b> |              |           |            |              |
| <b>City</b>              | <b>Brisbane</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94005</b> |
| <b>Phone #</b>           | <b>415-467-1123</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization      Broadmoor Police Department**

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 306</b> |              |           |            |              |
| <b>City</b>              | <b>Broadmoor</b>    | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94014</b> |
| <b>Phone #</b>           | <b>415-755-3838</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**      **Burlingame Police Department**

|                          |                     |              |           |            |                   |
|--------------------------|---------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>P.O. Box 551</b> |              |           |            |                   |
| <b>City</b>              | <b>Burlingame</b>   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94011-0551</b> |
| <b>Phone #</b>           | <b>415-692-8440</b> | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                     |              |           |            |                   |
| <b>Radio Frequencies</b> |                     |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 3       |                 |

**Organization**     **California Highway Patrol**

**Address**    **2555 First Ave.**

**City**        **Sacramento**

**State**   **CA**

**Zip**       **95818**

**Phone #**   **916-657-7261**

**Fax**       **916-446-4870**

**Emergency Number**

**Radio Frequencies**        **VHF: 154.9 Mhz**

**Resources**

**24 Hours: Zenith 12000**

**Law Enforcement Agencies**

**Area/Zone    2**

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**Organization**     **California Highway Patrol**

**Address**   **P.O. Box N**

**City**        **Fairfield**

**State**   **CA**

**Zip**       **94533**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: Zenith 2000**

**Enforcement Agencies**

**Area/Zone    2**

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**Organization**     **Clayton Police Department**

**Address**   **P.O. Box 280**

**City**        **Clayton**

**State**   **CA**

**Zip**       **94517**

**Phone #**   **415-672-4455**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---



|                          |                            |              |           |            |                   |
|--------------------------|----------------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>1198 El Camino Real</b> |              |           |            |                   |
| <b>City</b>              | <b>Colma</b>               | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94014-3295</b> |
| <b>Phone #</b>           | <b>415-997-8321</b>        | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                            |              |           |            |                   |
| <b>Radio Frequencies</b> |                            |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

|                          |                                              |              |           |            |              |
|--------------------------|----------------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Willow Pass Road &amp; Parkside Drive</b> |              |           |            |              |
| <b>City</b>              | <b>Concord</b>                               | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94519</b> |
| <b>Phone #</b>           | <b>510-671-3232</b>                          | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                              |              |           |            |              |
| <b>Radio Frequencies</b> |                                              |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 391</b> |              |           |            |              |
| <b>City</b>              | <b>Martinez</b>     | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94553</b> |
| <b>Phone #</b>           | <b>510-646-2441</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>333 90th Street</b> |              |           |            |              |
| <b>City</b>              | <b>Daly City</b>       | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94105</b> |
| <b>Phone #</b>           | <b>415-991-8142</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 3       |                 |

**Organization**      **Davis Police Department**

|                          |                       |              |           |                  |
|--------------------------|-----------------------|--------------|-----------|------------------|
| <b>Address</b>           | <b>226 “F” Street</b> |              |           |                  |
| <b>City</b>              | <b>Davis</b>          | <b>State</b> | <b>CA</b> | <b>Zip 95616</b> |
| <b>Phone #</b>           | <b>916-756-3740</b>   | <b>Fax</b>   |           |                  |
| <b>Emergency Number</b>  |                       |              |           |                  |
| <b>Radio Frequencies</b> |                       |              |           |                  |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**      **East Bay Regional Parks Police Dept.**

|                          |                               |              |                     |            |              |
|--------------------------|-------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>17930 Lake Chabot Road</b> |              |                     |            |              |
| <b>City</b>              | <b>Castro Valley</b>          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94546</b> |
| <b>Phone #</b>           | <b>510-881-1833</b>           | <b>Fax</b>   | <b>510-538-7743</b> |            |              |
| <b>Emergency Number</b>  |                               |              |                     |            |              |
| <b>Radio Frequencies</b> |                               |              |                     |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

|                          |                             |          |              |           |                |                        |
|--------------------------|-----------------------------|----------|--------------|-----------|----------------|------------------------|
| <b>Address</b>           | <b>2415 University Ave.</b> |          | <b>State</b> | <b>CA</b> | <b>Zip</b>     | <b>94303</b>           |
| <b>City</b>              | <b>East Palo Alto</b>       |          |              |           |                |                        |
| <b>Phone #</b>           | <b>415-853-3100</b>         |          | <b>Fax</b>   |           |                |                        |
| <b>Emergency Number</b>  |                             |          |              |           |                |                        |
| <b>Radio Frequencies</b> |                             |          |              |           |                |                        |
| <b>Resources</b>         |                             |          |              |           | <b>Section</b> | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>            | <b>2</b> |              |           |                |                        |

|                          |                             |  |              |                |                        |              |
|--------------------------|-----------------------------|--|--------------|----------------|------------------------|--------------|
| <b>Address</b>           | <b>10900 San Pablo Ave.</b> |  | <b>State</b> | <b>CA</b>      | <b>Zip</b>             | <b>94530</b> |
| <b>City</b>              | <b>El Cerrito</b>           |  |              |                |                        |              |
| <b>Phone #</b>           | <b>415-237-2123</b>         |  | <b>Fax</b>   |                |                        |              |
| <b>Emergency Number</b>  |                             |  |              |                |                        |              |
| <b>Radio Frequencies</b> |                             |  |              |                |                        |              |
| <b>Resources</b>         |                             |  |              | <b>Section</b> | <b>Law Enforcement</b> |              |
| <b>Agencies</b>          | <b>Area/Zone</b>            |  |              | <b>1</b>       |                        |              |

|                          |                           |              |           |                |                        |
|--------------------------|---------------------------|--------------|-----------|----------------|------------------------|
| <b>Address</b>           | <b>2449 Poweel Street</b> | <b>State</b> | <b>CA</b> | <b>Zip</b>     | <b>94608</b>           |
| <b>City</b>              | <b>Emeryville</b>         |              |           |                |                        |
| <b>Phone #</b>           | <b>510-596-3707</b>       | <b>Fax</b>   |           |                |                        |
| <b>Emergency Number</b>  |                           |              |           |                |                        |
| <b>Radio Frequencies</b> |                           |              |           |                |                        |
| <b>Resources</b>         |                           |              |           | <b>Section</b> | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>          |              |           | <b>1</b>       |                        |







|                          |                           |              |           |            |              |
|--------------------------|---------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>217 Arlington Ave.</b> |              |           |            |              |
| <b>City</b>              | <b>Kensington</b>         | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94707</b> |
| <b>Phone #</b>           | <b>510-526-4141</b>       | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                           |              |           |            |              |
| <b>Radio Frequencies</b> |                           |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**      **Los Altos Police Department**

|                          |                                  |              |           |            |                   |
|--------------------------|----------------------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>#1 North San Antonio Road</b> |              |           |            |                   |
| <b>City</b>              | <b>Los Altos</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94022-3088</b> |
| <b>Phone #</b>           | <b>415-948-8223</b>              | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                                  |              |           |            |                   |
| <b>Radio Frequencies</b> |                                  |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization** Marin Sheriff's Department

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Civic Center</b> |              |           |            |              |
| <b>City</b>              | <b>San Rafael</b>   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94903</b> |
| <b>Phone #</b>           | <b>415-499-7250</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

|                          |                             |  |              |                |                        |              |
|--------------------------|-----------------------------|--|--------------|----------------|------------------------|--------------|
| <b>Address</b>           | <b>525 Henrietta Street</b> |  | <b>State</b> | <b>CA</b>      | <b>Zip</b>             | <b>94553</b> |
| <b>City</b>              | <b>Martinez</b>             |  |              |                |                        |              |
| <b>Phone #</b>           | <b>510-372-3545</b>         |  | <b>Fax</b>   |                |                        |              |
| <b>Emergency Number</b>  |                             |  |              |                |                        |              |
| <b>Radio Frequencies</b> |                             |  |              |                |                        |              |
| <b>Resources</b>         |                             |  |              | <b>Section</b> | <b>Law Enforcement</b> |              |
| <b>Agencies</b>          | <b>Area/Zone</b>            |  |              | <b>1</b>       |                        |              |

|                          |                          |              |                |            |                        |
|--------------------------|--------------------------|--------------|----------------|------------|------------------------|
| <b>Address</b>           | <b>801 Laurel Street</b> | <b>State</b> | <b>CA</b>      | <b>Zip</b> | <b>94025</b>           |
| <b>City</b>              | <b>Menlo Park</b>        |              |                |            |                        |
| <b>Phone #</b>           | <b>415-858-3300</b>      | <b>Fax</b>   |                |            |                        |
| <b>Emergency Number</b>  |                          |              |                |            |                        |
| <b>Radio Frequencies</b> |                          |              |                |            |                        |
| <b>Resources</b>         |                          |              | <b>Section</b> |            | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>         |              | <b>1</b>       |            |                        |

|                          |                      |              |                |            |                        |
|--------------------------|----------------------|--------------|----------------|------------|------------------------|
| <b>Address</b>           | <b>P.O. Box 1029</b> | <b>State</b> | <b>CA</b>      | <b>Zip</b> | <b>94942</b>           |
| <b>City</b>              | <b>Mill Valley</b>   |              |                |            |                        |
| <b>Phone #</b>           | <b>415-388-4142</b>  | <b>Fax</b>   |                |            |                        |
| <b>Emergency Number</b>  |                      |              |                |            |                        |
| <b>Radio Frequencies</b> |                      |              |                |            |                        |
| <b>Resources</b>         |                      |              | <b>Section</b> |            | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>     |              | <b>1</b>       |            |                        |





**Organization Mountain View Police Department**

**Address 1000 Villa Street**

**City Mountain View**

**State CA**

**Zip 94041**

**Phone # 415-903-6344**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---

**Organization Newark Police Department**

**Address 37101 Newark Blvd.**

**City Neward**

**State CA**

**Zip 94560**

**Phone # 510-793-1400**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---

**Organization Novato Police Department**

**Address 909 Machin Ave.**

**City Novato**

**State CA**

**Zip 94945**

**Phone # 415-897-4361**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

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|                          |                                 |              |           |            |                   |
|--------------------------|---------------------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>969 Petaluma Blvd. North</b> |              |           |            |                   |
| <b>City</b>              | <b>Petaluma</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94952-6320</b> |
| <b>Phone #</b>           | <b>707-778-3000</b>             | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                                 |              |           |            |                   |
| <b>Radio Frequencies</b> |                                 |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**      **Piedmont Police Department**

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>403 Highland Ave.</b> |              |           |            |              |
| <b>City</b>              | <b>Piedmont</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94611</b> |
| <b>Phone #</b>           | <b>415-420-3000</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

**Organization**      **Pinole Police Department**

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>880 Tennent Ave</b> |              |           |            |              |
| <b>City</b>              | <b>Pinole</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94564</b> |
| <b>Phone #</b>           | <b>510-724-8950</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

|                          |                      |              |                |                         |
|--------------------------|----------------------|--------------|----------------|-------------------------|
| <b>Address</b>           | <b>55 Civic Ave.</b> |              |                |                         |
| <b>City</b>              | <b>Pittsburg</b>     | <b>State</b> | <b>CA</b>      | <b>Zip</b> <b>94565</b> |
| <b>Phone #</b>           | <b>510-439-4980</b>  | <b>Fax</b>   |                |                         |
| <b>Emergency Number</b>  |                      |              |                |                         |
| <b>Radio Frequencies</b> |                      |              |                |                         |
| <b>Resources</b>         |                      |              | <b>Section</b> | <b>Law Enforcement</b>  |
| <b>Agencies</b>          | <b>Area/Zone</b>     |              | <b>2</b>       |                         |

|                          |                        |  |                |                        |            |              |
|--------------------------|------------------------|--|----------------|------------------------|------------|--------------|
| <b>Address</b>           | <b>330 Civic Drive</b> |  | <b>State</b>   | <b>CA</b>              | <b>Zip</b> | <b>94523</b> |
| <b>City</b>              | <b>Pleasant Hill</b>   |  |                |                        |            |              |
| <b>Phone #</b>           | <b>415-671-4600</b>    |  | <b>Fax</b>     |                        |            |              |
| <b>Emergency Number</b>  |                        |  |                |                        |            |              |
| <b>Radio Frequencies</b> |                        |  |                |                        |            |              |
| <b>Resources</b>         |                        |  | <b>Section</b> | <b>Law Enforcement</b> |            |              |
| <b>Agencies</b>          | <b>Area/Zone</b>       |  | <b>1</b>       |                        |            |              |

|                          |                                       |                |                        |
|--------------------------|---------------------------------------|----------------|------------------------|
| <b>Address</b>           | <b>P.O. Box 909, 4833 Bernal Ave.</b> |                |                        |
| <b>City</b>              | <b>Pleasanton</b>                     | <b>State</b>   | <b>CA</b>              |
|                          |                                       | <b>Zip</b>     | <b>94566-0802</b>      |
| <b>Phone #</b>           | <b>510-484-8127</b>                   | <b>Fax</b>     |                        |
| <b>Emergency Number</b>  |                                       |                |                        |
| <b>Radio Frequencies</b> |                                       |                |                        |
| <b>Resources</b>         |                                       | <b>Section</b> | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>                      | <b>1</b>       |                        |



|                          |                             |              |           |            |              |
|--------------------------|-----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>259 North Wilma Ave.</b> |              |           |            |              |
| <b>City</b>              | <b>Ripon</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95366</b> |
| <b>Phone #</b>           | <b>209-599-2102</b>         | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                             |              |           |            |              |
| <b>Radio Frequencies</b> |                             |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

**Organization     Rodeo-Hercules Police Protection District**

|                          |                       |              |           |            |              |
|--------------------------|-----------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>326 3rd Street</b> |              |           |            |              |
| <b>City</b>              | <b>Rodeo</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94572</b> |
| <b>Phone #</b>           | <b>510-799-4561</b>   | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                       |              |           |            |              |
| <b>Radio Frequencies</b> |                       |              |           |            |              |

**Resources** **Aternate #:** 510-799-0395**Section**  
**Law Enforcement Agencies** **Area/Zone** 1

**Organization**      **Ross Police Department**

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 320</b> |              |           |            |              |
| <b>City</b>              | <b>Ross</b>         | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94957</b> |
| <b>Phone #</b>           | <b>415-453-2727</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 3       |                 |

**Organization Sacramento Police Department**

**Address 813 Sixth Street**

**City Sacramento**

**State CA**

**Zip 95814**

**Phone # 916-449-5121**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**3**

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**Organization Sacramento Sheriff's Department**

**Address P.O. Box 988**

**City Sacramento**

**State CA**

**Zip 95805**

**Phone # 916-440-5115**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

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**Organization San Bruno Police Department**

**Address 567 El Camino Real**

**City San Bruno**

**State CA**

**Zip 94066**

**Phone # 415-877-8014**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

---



**Organization**     **San Carlos Police Department**

**Address**   **666 Elm Street**

**City**       **San Carlos**

**State**   **CA**

**Zip**       **94070**

**Phone #**   **415-593-8014**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

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**Organization**     **San Francisco Police Department**

**Address**   **850 Bryant Street**

**City**       **San Francisco**

**State**   **CA**

**Zip**       **94103**

**Phone #**   **415-553-0123**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**1**

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**Organization**     **San Francisco Sheriff's Department**

**Address**   **400 Van Ness Ave.**

**City**       **San Francisco**

**State**   **CA**

**Zip**       **94102**

**Phone #**   **415-554-7225**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Law Enforcement**

**Agencies Area/Zone**

**3**

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|                          |                     |              |           |            |                   |
|--------------------------|---------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>P.O. Box 60</b>  |              |           |            |                   |
| <b>City</b>              | <b>San Rafael</b>   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94915-0060</b> |
| <b>Phone #</b>           | <b>415-485-3004</b> | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                     |              |           |            |                   |
| <b>Radio Frequencies</b> |                     |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization** Santa Clara Police Department

|                          |                                |              |           |            |              |
|--------------------------|--------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1541 Civic Center Drive</b> |              |           |            |              |
| <b>City</b>              | <b>Santa Clara</b>             | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95050</b> |
| <b>Phone #</b>           | <b>408-984-3194</b>            | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                |              |           |            |              |
| <b>Radio Frequencies</b> |                                |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization** Santa Clara Sheriff's Department

|                          |                           |              |           |            |              |
|--------------------------|---------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1005 Timothy Drive</b> |              |           |            |              |
| <b>City</b>              | <b>Santa Clara</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95133</b> |
| <b>Phone #</b>           | <b>408-229-2101</b>       | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                           |              |           |            |              |
| <b>Radio Frequencies</b> |                           |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 35</b>  |              |           |            |              |
| <b>City</b>              | <b>Sausalito</b>    | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94966</b> |
| <b>Phone #</b>           | <b>415-289-4170</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

**Organization**      **Solano Sheriff's Department**

|                          |                                  |              |           |            |              |
|--------------------------|----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>530 Union Ave., Suite 100</b> |              |           |            |              |
| <b>City</b>              | <b>Fairfield</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94533</b> |
| <b>Phone #</b>           | <b>707-421-7090</b>              | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                  |              |           |            |              |
| <b>Radio Frequencies</b> |                                  |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization**      **Sonoma Sheriff's Department**

|                          |                                          |              |           |            |              |
|--------------------------|------------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>600 Administration Drive, Suite C</b> |              |           |            |              |
| <b>City</b>              | <b>Santa Rosa</b>                        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95405</b> |
| <b>Phone #</b>           | <b>707-527-2511</b>                      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                          |              |           |            |              |
| <b>Radio Frequencies</b> |                                          |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

|                          |                                 |                |                        |
|--------------------------|---------------------------------|----------------|------------------------|
| <b>Address</b>           | <b>33 Arroyo Drive, Suite C</b> |                |                        |
| <b>City</b>              | <b>S. San Francisco</b>         | <b>State</b>   | <b>CA</b>              |
|                          |                                 | <b>Zip</b>     | <b>94080</b>           |
| <b>Phone #</b>           | <b>415-877-8900</b>             | <b>Fax</b>     |                        |
| <b>Emergency Number</b>  |                                 |                |                        |
| <b>Radio Frequencies</b> |                                 |                |                        |
| <b>Resources</b>         |                                 | <b>Section</b> | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>                | <b>3</b>       |                        |

|                          |                              |  |                |                        |            |              |
|--------------------------|------------------------------|--|----------------|------------------------|------------|--------------|
| <b>Address</b>           | <b>22 East Market Street</b> |  | <b>State</b>   | <b>CA</b>              | <b>Zip</b> | <b>95202</b> |
| <b>City</b>              | <b>Stockton</b>              |  |                |                        |            |              |
| <b>Phone #</b>           | <b>209-944-8377</b>          |  | <b>Fax</b>     |                        |            |              |
| <b>Emergency Number</b>  |                              |  |                |                        |            |              |
| <b>Radio Frequencies</b> |                              |  |                |                        |            |              |
| <b>Resources</b>         |                              |  | <b>Section</b> | <b>Law Enforcement</b> |            |              |
| <b>Agencies</b>          | <b>Area/Zone</b>             |  | <b>2</b>       |                        |            |              |

|                          |                               |              |                |            |                        |
|--------------------------|-------------------------------|--------------|----------------|------------|------------------------|
| <b>Address</b>           | <b>701 Civic Center Blvd.</b> | <b>State</b> | <b>CA</b>      | <b>Zip</b> | <b>94585-2693</b>      |
| <b>City</b>              | <b>Suisan</b>                 |              |                |            |                        |
| <b>Phone #</b>           | <b>707-421-7350</b>           | <b>Fax</b>   |                |            |                        |
| <b>Emergency Number</b>  |                               |              |                |            |                        |
| <b>Radio Frequencies</b> |                               |              |                |            |                        |
| <b>Resources</b>         |                               |              | <b>Section</b> |            | <b>Law Enforcement</b> |
| <b>Agencies</b>          | <b>Area/Zone</b>              |              | <b>1</b>       |            |                        |

|                          |                             |              |           |            |                   |
|--------------------------|-----------------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>700 All American Way</b> |              |           |            |                   |
| <b>City</b>              | <b>Sunnyvale</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94806-3707</b> |
| <b>Phone #</b>           | <b>408-730-7100</b>         | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                             |              |           |            |                   |
| <b>Radio Frequencies</b> |                             |              |           |            |                   |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization** Tiburon Police Department

|                          |                           |              |           |            |              |
|--------------------------|---------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1155 Tiburon Blvd.</b> |              |           |            |              |
| <b>City</b>              | <b>Tiburon</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94920</b> |
| <b>Phone #</b>           | <b>415-435-2526</b>       | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                           |              |           |            |              |
| <b>Radio Frequencies</b> |                           |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 3       |                 |

**Organization**      **Tracy Police Department**

|                          |                             |              |           |            |              |
|--------------------------|-----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>400 East 10th Street</b> |              |           |            |              |
| <b>City</b>              | <b>Tracy</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95376</b> |
| <b>Phone #</b>           | <b>209-835-4550</b>         | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                             |              |           |            |              |
| <b>Radio Frequencies</b> |                             |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>250 Doherty Drive</b> |              |           |            |              |
| <b>City</b>              | <b>Larkspur</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94939</b> |
| <b>Phone #</b>           | <b>415-927-5150</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 1       |                 |

**Organization      Union City Police Department**

|                          |                                   |              |           |            |              |
|--------------------------|-----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>34009- Alvarado-Niles Road</b> |              |           |            |              |
| <b>City</b>              | <b>Union City</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94587</b> |
| <b>Phone #</b>           | <b>510-471-1365</b>               | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                   |              |           |            |              |
| <b>Radio Frequencies</b> |                                   |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |

**Organization**      **Vallejo Police Department**

|                          |                      |              |           |            |              |
|--------------------------|----------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 1031</b> | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94950</b> |
| <b>City</b>              | <b>Vallejo</b>       |              |           |            |              |
| <b>Phone #</b>           | <b>707-648-4540</b>  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                      |              |           |            |              |
| <b>Radio Frequencies</b> |                      |              |           |            |              |

| Resources          | Section | Law Enforcement |
|--------------------|---------|-----------------|
| Agencies Area/Zone | 2       |                 |





|                          |                                                     |              |                     |            |              |
|--------------------------|-----------------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 13222, Bldg. 02028, Department 5620</b> |              |                     |            |              |
| <b>City</b>              | <b>Sacramento</b>                                   | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>95853</b> |
| <b>Phone #</b>           | <b>916-355-3473</b>                                 | <b>Fax</b>   | <b>916-355-4767</b> |            |              |
| <b>Emergency Number</b>  |                                                     |              |                     |            |              |
| <b>Radio Frequencies</b> |                                                     |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Alameda Fire Department

|                          |                         |              |                     |            |              |
|--------------------------|-------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1300 Park Street</b> |              |                     |            |              |
| <b>City</b>              | <b>Alameda</b>          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94501</b> |
| <b>Phone #</b>           | <b>510-748-4601</b>     | <b>Fax</b>   | <b>510-748-4606</b> |            |              |
| <b>Emergency Number</b>  |                         |              |                     |            |              |
| <b>Radio Frequencies</b> |                         |              |                     |            |              |

| Resources              | 24 Hours: 510-522-4109 |           |
|------------------------|------------------------|-----------|
| Cellular: 510-918-8233 | Fire Departments       | Area/Zone |
| 1                      |                        |           |

**Organization** Albany Fire Department

|                          |                                                    |              |                     |            |              |
|--------------------------|----------------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1000 San Pablo Ave.</b>                         |              |                     |            |              |
| <b>City</b>              | <b>Albany</b>                                      | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94706</b> |
| <b>Phone #</b>           | <b>510-528-5771</b>                                | <b>Fax</b>   | <b>510-528-5774</b> |            |              |
| <b>Emergency Number</b>  |                                                    |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>154.538, 154.070, 154.190, 158.775, 156.075</b> |              |                     |            |              |

| Resources           | Cellular: 510-380-2101 |
|---------------------|------------------------|
| Pager: 510-716-3787 | Fire Departments       |
| Section             | Area/Zone              |
| 1                   |                        |



**Organization Benicia Fire Department**

**Address 250 East L Street**

**City Benicia**

**State CA**

**Zip 94510**

**Phone # 707-746-4275**

**Fax 707-745-4425**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

---

**Organization Berkeley Fire Department**

**Address 2121 McKinley Ave.**

**City Berkeley**

**State CA**

**Zip 94703**

**Phone # 510-644-6665**

**Fax 510-664-6679**

**Emergency Number**

**Radio Frequencies 154.190, 158.940, 131.8, 154.340, 159.135, 153.430, 153.830, 154.235, 154.355**

**Resources**

**24 Hours: 510-664-6768**

**Fire Departments**

**Area/Zone**

**2**

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**Organization Bethel Island Fire Protection District**

**Address 3045 Ranch Lane, Box 623**

**City Bethel Island**

**State CA**

**Zip 94511**

**Phone # 510-684-2211**

**Fax 510-684-3154**

**Emergency Number**

**Radio Frequencies 46.10, 46.18, 46.24, 46.39**

**CG Channels: 16, 22**

**White Fire 1, 2, 3**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

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**Organization Bloomfield Volunteer Fire Department**

**Address P.O. Box 400**  
**City Valley Ford State CA Zip 94972**

**Phone # 707-795-0625 Fax**  
**Emergency Number**  
**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization Bodega Bay Fire Protection District**

**Address P.O. Box 6**  
**City Bodega Bay State CA Zip 94923**

**Phone # 707-875-3700 Fax**  
**Emergency Number**  
**Radio Frequencies 154.770, 154.205, 154.445, 155.100, 156.075, 151..450, 151.325, 151.400**  
**White Fire 1, 2, 3; Marine 22**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization Bodega Volunteer Fire Company**

**Address P.O. Box 28**  
**City Bodega Bay State CA Zip 94922**

**Phone # 707-876-3103 Fax**  
**Emergency Number**  
**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization Bohemian Grove Fire Department**

**Address 20601 Bohemian Ave**

**City Monte Rio State CA Zip 95462**

**Phone # 707-865-2311**

**Fax 707-865-1194**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

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**Organization Bolinas Fire Protection District**

**Address P.O. Box 126**

**City Bolinas State CA Zip 94924**

**Phone # 415-868-1566**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Dispatch: 415-499-6717 (Marin**

**Co.)Section**

**Fire Departments**

**Area/Zone**

**1**

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**Organization Brisbane Fire Department**

**Address 3445 Bayshore Blvd.**

**City Brisbane State CA Zip 94005**

**Phone # 415-467-1122**

**Fax 415-467-8770**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

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|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1399 Rollins Road</b> |              |           |            |              |
| <b>City</b>              | <b>Burlingame</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94010</b> |
| <b>Phone #</b>           | <b>415-343-4545</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

|                         |                                  |
|-------------------------|----------------------------------|
| <b>Resources</b>        | <b>Alternate #: 415-344-9950</b> |
| <b>Fire Departments</b> | <b>Area/Zone 2</b>               |

**Organization**      **Byron Fire Department**

|                          |                     |              |                     |            |              |
|--------------------------|---------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 40</b>  |              |                     |            |              |
| <b>City</b>              | <b>Byron</b>        | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94514</b> |
| <b>Phone #</b>           | <b>510-634-4833</b> | <b>Fax</b>   | <b>510-634-8741</b> |            |              |
| <b>Emergency Number</b>  |                     |              |                     |            |              |
| <b>Radio Frequencies</b> |                     |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **C&H Sugar Company Fire Department**

|                          |                       |              |                     |            |              |
|--------------------------|-----------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>830 Loring Ave</b> |              |                     |            |              |
| <b>City</b>              | <b>Crockett</b>       | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94525</b> |
| <b>Phone #</b>           | <b>510-787-2121</b>   | <b>Fax</b>   | <b>510-787-1135</b> |            |              |
| <b>Emergency Number</b>  |                       |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>460.200</b>        |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

|                          |                     |              |                     |            |              |
|--------------------------|---------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 670</b> |              |                     |            |              |
| <b>City</b>              | <b>Santa Rosa</b>   | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>95402</b> |
| <b>Phone #</b>           | <b>707-576-2275</b> | <b>Fax</b>   | <b>707-756-2574</b> |            |              |
| <b>Emergency Number</b>  |                     |              |                     |            |              |
| <b>Radio Frequencies</b> |                     |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** California Dept. of Forestry and Fire Protection

|                          |                                         |                |                     |            |                   |
|--------------------------|-----------------------------------------|----------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>1416 9th Street, P.O. Box 944246</b> |                |                     |            |                   |
| <b>City</b>              | <b>Sacramento</b>                       | <b>State</b>   | <b>CA</b>           | <b>Zip</b> | <b>94244-2460</b> |
| <b>Phone #</b>           | <b>916-653-5373</b>                     | <b>Fax</b>     | <b>916-653-8961</b> |            |                   |
| <b>Emergency Number</b>  |                                         |                |                     |            |                   |
| <b>Radio Frequencies</b> |                                         | <b>154.280</b> |                     |            |                   |

|                         |                               |                |
|-------------------------|-------------------------------|----------------|
| <b>Resources</b>        | <b>24 Hours: 946-653-8362</b> | <b>Section</b> |
| <b>Fire Departments</b> | <b>Area/Zone 1</b>            |                |

**Organization** California Dept. of Forestry

|                          |                                                             |              |                     |            |              |
|--------------------------|-------------------------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>15670 S. Monterey Road</b>                               |              |                     |            |              |
| <b>City</b>              | <b>Morgan Hill</b>                                          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>95037</b> |
| <b>Phone #</b>           | <b>408-779-2121</b>                                         | <b>Fax</b>   | <b>408-778-6149</b> |            |              |
| <b>Emergency Number</b>  |                                                             |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>159.345, 151.445, 159.300, 151.355, 159.330, 151.265</b> |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|



|                          |                        |              |                     |            |                   |
|--------------------------|------------------------|--------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>P.O. Box 944246</b> |              |                     |            |                   |
| <b>City</b>              | <b>Sacramento</b>      | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94244-2460</b> |
| <b>Phone #</b>           | <b>916-653-5373</b>    | <b>Fax</b>   | <b>916-653-8961</b> |            |                   |
| <b>Emergency Number</b>  |                        |              |                     |            |                   |
| <b>Radio Frequencies</b> | <b>154.280</b>         |              |                     |            |                   |

**Organization**      **California Department of Forestry**

|                          |                      |              |           |            |              |
|--------------------------|----------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>20 Tower Road</b> |              |           |            |              |
| <b>City</b>              | <b>Belmont</b>       | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94002</b> |
| <b>Phone #</b>           | <b>415-435-1612</b>  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                      |              |           |            |              |
| <b>Radio Frequencies</b> |                      |              |           |            |              |

**Organization**      **Camp Meeker Volunteer Fire Company**

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Box 511</b>      |              |           |            |              |
| <b>City</b>              | <b>Camp Meeker</b>  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95419</b> |
| <b>Phone #</b>           | <b>707-874-2154</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**    **Castro Valley Fire Department**

**Address**    **20336 San Miguel Avenue**

**City**        **Castro Valley**                      **State**    **CA**                      **Zip**    **94546**

**Phone #**    **510-670-5880**

**Fax**        **510-538-3955**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**2**

---

**Organization**    **Chevron Chemical Company**

**Address**    **940 Hensley Street**

**City**        **Richmond**                      **State**    **CA**                      **Zip**    **94804**

**Phone #**    **510-231-8388**

**Fax**

**Emergency Number**

**Radio Frequencies**            **451.612, 451.662, 456.612, 456.662**

**Resources**

**Pager: 510-484-6631**

**Mobile Phone: 510-816-1237**

**Section**

**Fire Departments**

**Area/Zone**

**2**

---

**Organization**    **Chevron Refinery, Richmond**

**Address**    **841 Chevron Way, P.O. Box 1272**

**City**        **Richmond**                      **State**    **CA**                      **Zip**    **94802**

**Phone #**    **510-620-4200**

**Fax**        **510-620-5853**

**Emergency Number**            **510-242-5555**

**Radio Frequencies**

**Resources**

**154.28, 46.060, 154.385**

**Chief: 510-620-4340**

**Section**

**Fire Departments**

**Area/Zone**

**2**

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|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>310 Standard Ave.</b> |              |           |            |              |
| <b>City</b>              | <b>Richmond</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94801</b> |
| <b>Phone #</b>           | <b>510-620-3768</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization      Clarksburg Fre Protection District**

|                           |                       |              |           |            |              |
|---------------------------|-----------------------|--------------|-----------|------------|--------------|
| <b>Address</b>            | <b>P.O.Box 513</b>    |              |           |            |              |
| <b>City</b>               | <b>Clarksburg</b>     | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95612</b> |
| <b>Phone #</b>            | <b>916-744-1700</b>   | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>   |                       |              |           |            |              |
| <b>Radio Frequencies</b>  | <b>154.885, 141.3</b> |              |           |            |              |
| <b>White Fire 1, 2, 3</b> |                       |              |           |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Colima Fire District**

|                           |                         |              |           |            |              |
|---------------------------|-------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>            | <b>50 Reiner Street</b> |              |           |            |              |
| <b>City</b>               | <b>Colma</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94014</b> |
| <b>Phone #</b>            | <b>916-744-1700</b>     | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>   |                         |              |           |            |              |
| <b>Radio Frequencies</b>  | <b>154-885, 141.3</b>   |              |           |            |              |
| <b>White Fire 1, 2, 3</b> |                         |              |           |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|





|                          |                                 |              |                     |                |                         |
|--------------------------|---------------------------------|--------------|---------------------|----------------|-------------------------|
| <b>Address</b>           | <b>350 Main Street</b>          |              |                     |                |                         |
| <b>City</b>              | <b>Rio Vista</b>                | <b>State</b> | <b>CA</b>           | <b>Zip</b>     | <b>94571</b>            |
| <b>Phone #</b>           | <b>707-421-7090</b>             | <b>Fax</b>   | <b>707-374-6324</b> |                |                         |
| <b>Emergency Number</b>  | <b>707-374-2233</b>             |              |                     |                |                         |
| <b>Radio Frequencies</b> | <b>156.000, 154.40, 154.280</b> |              |                     |                |                         |
| <b>Resources</b>         |                                 |              |                     | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                 |              |                     | <b>1</b>       |                         |

|                          |                                    |              |           |                |                         |
|--------------------------|------------------------------------|--------------|-----------|----------------|-------------------------|
| <b>Address</b>           | <b>RFTA, Bldg. 636, 5th Street</b> |              |           |                |                         |
| <b>City</b>              | <b>Dublin</b>                      | <b>State</b> | <b>CA</b> | <b>Zip</b>     | <b>94568</b>            |
| <b>Phone #</b>           | <b>510-828-2057</b>                | <b>Fax</b>   |           |                |                         |
| <b>Emergency Number</b>  |                                    |              |           |                |                         |
| <b>Radio Frequencies</b> | <b>150.775</b>                     |              |           |                |                         |
| <b>Resources</b>         |                                    |              |           | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                    |              |           | <b>3</b>       |                         |

|                          |                                                    |              |                     |                               |                |
|--------------------------|----------------------------------------------------|--------------|---------------------|-------------------------------|----------------|
| <b>Address</b>           | <b>140 North Jackson</b>                           | <b>State</b> | <b>CA</b>           | <b>Zip</b>                    | <b>95620</b>   |
| <b>City</b>              | <b>Dixon</b>                                       |              |                     |                               |                |
| <b>Phone #</b>           | <b>916-678-7060</b>                                | <b>Fax</b>   | <b>916-678-0960</b> |                               |                |
| <b>Emergency Number</b>  |                                                    |              |                     |                               |                |
| <b>Radio Frequencies</b> | <b>156.000, 154.280, 154.085, 154.340, 154.145</b> |              |                     |                               |                |
| <b>Resources</b>         |                                                    |              |                     | <b>24 Hours: 916-678-7082</b> | <b>Section</b> |
| <b>Fire Departments</b>  |                                                    |              |                     | <b>Area/Zone</b>              | <b>1</b>       |

**Organization**     **Dougherty Regional Fire Authority**

**Address**   **9399 Fir Crest Lane**

**City**       **San Ramon**

**State**   **CA**

**Zip**       **94583**

**Phone #**   **510-830-8601**

**Fax**       **510-830-8630**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

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**Organization**     **East Davis Fire Protection District**

**Address**   **530 5th Street**

**City**       **Davis**

**State**   **CA**

**Zip**       **95616**

**Phone #**   **916-756-3743**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**2**

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**Organization**     **East Diablo Fire Protection District**

**Address**   **745 1st Street**

**City**       **Brentwood**

**State**   **CA**

**Zip**       **94513**

**Phone #**   **510-634-4300**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

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**Organization**     **Eden Consolidated Fire Protection District**

**Address**    **1426 164th Ave.**

**City**        **San Leandro**

**State**   **CA**

**Zip**        **94578**

**Phone #**   **510-670-5850**

**Fax**        **510-276-5915**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**2**

---

**Organization**     **El Cerrito Fire Department**

**Address**    **10900 San Pablo Ave.**

**City**        **El Cerrito**

**State**   **CA**

**Zip**        **94530**

**Phone #**   **510-215-4450**

**Fax**        **510-235-6618**

**Emergency Number**

**Radio Frequencies**        **154.280, 46.06**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

---

**Organization**     **El khorn Slough**

**Address**    **16510 County Road, 117**

**City**        **W. Sacramento**

**State**   **CA**

**Zip**        **95691**

**Phone #**   **916-371-4541**

**Fax**

**Emergency Number**

**Radio Frequencies**        **154.445**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**1**

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**Organization Fort Ross Volunteer Fire Company**

**Address P.O. Box 129**

**City Cazadero State CA Zip 94521**

**Phone # 707-632-5911 Fax 510-632-5751**

**Emergency Number**

**Radio Frequencies 151.325, 151.400, 151.460, 153.775, 154.160, 154.175, 154.265, 154.280, 154.295, 154.310, 154.995, 155.100**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization Foster City Fire Department**

**Address 1040 E. Hillsdale Blvd.**

**City Foster City State CA Zip 94404**

**Phone # 415-574-5246 Fax 415-374-7305**

**Emergency Number**

**Radio Frequencies 153.950, 154.280, 154.265**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization Fremont Fire Department**

**Address 39100 Liberty Street, P.O. Box 5006**

**City Fremont State CA Zip 94537**

**Phone # 510-791-4292 Fax 510-793-0551**

**Emergency Number**

**Radio Frequencies 488.4125, 154.280**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

|                          |                     |              |                     |                |                         |
|--------------------------|---------------------|--------------|---------------------|----------------|-------------------------|
| <b>Address</b>           | <b>Box 367</b>      |              |                     |                |                         |
| <b>City</b>              | <b>Guerneville</b>  | <b>State</b> | <b>CA</b>           | <b>Zip</b>     | <b>95446</b>            |
| <b>Phone #</b>           | <b>707-869-9089</b> | <b>Fax</b>   | <b>707-869-0553</b> |                |                         |
| <b>Emergency Number</b>  | <b>707-576-1371</b> |              |                     |                |                         |
| <b>Radio Frequencies</b> | <b>154.310</b>      |              |                     |                |                         |
| <b>Resources</b>         |                     |              |                     | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                     |              |                     | <b>1</b>       |                         |

|                          |                                 |              |                     |                |                         |
|--------------------------|---------------------------------|--------------|---------------------|----------------|-------------------------|
| <b>Address</b>           | <b>210 San Mateo Road, #101</b> |              |                     |                |                         |
| <b>City</b>              | <b>Half Moon Bay</b>            | <b>State</b> | <b>CA</b>           | <b>Zip</b>     | <b>94019</b>            |
| <b>Phone #</b>           | <b>415-726-5213</b>             | <b>Fax</b>   | <b>415-726-0132</b> |                |                         |
| <b>Emergency Number</b>  |                                 |              |                     |                |                         |
| <b>Radio Frequencies</b> | <b>154.340</b>                  |              |                     |                |                         |
| <b>Resources</b>         |                                 |              |                     | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                 |              |                     | <b>1</b>       |                         |

|                          |                                  |  |              |                     |                         |
|--------------------------|----------------------------------|--|--------------|---------------------|-------------------------|
| <b>Address</b>           | <b>25151 Clawiter Road</b>       |  |              |                     |                         |
| <b>City</b>              | <b>Hayward</b>                   |  | <b>State</b> | <b>CA</b>           | <b>Zip 94545</b>        |
| <b>Phone #</b>           | <b>510-293-8624</b>              |  | <b>Fax</b>   | <b>510-293-8691</b> |                         |
| <b>Emergency Number</b>  | <b>911 (Local)</b>               |  |              |                     |                         |
| <b>Radio Frequencies</b> | <b>154.070, 154.280, 460.600</b> |  |              |                     |                         |
| <b>Resources</b>         |                                  |  |              | <b>Section</b>      | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                  |  |              | <b>1</b>            |                         |

**Organization Hillsborough Fire Department**

**Address 1600 Floribunda Ave.**

**City Hillsborough State CA Zip 94010**

**Phone # 415-579-3822**

**Fax**

**Emergency Number**

**Radio Frequencies 153.950,  
White Fire 1, 2, 3**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

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**Organization Holt Fire Company**

**Address P.O. Box 158**

**City Holt State CA Zip 95234**

**Phone # 209-465-0460**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

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**Organization Isleton Fire Protection District**

**Address P.O. Box 716**

**City Isleton State CA Zip 95641**

**Phone # 916-777-7776**

**Fax 916-777-7775**

**Emergency Number**

**Radio Frequencies 154.280, 154.340, 156.000**

**Resources**

**Com Center 707-421-7090Section**

**Fire Departments**

**Area/Zone 1**

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|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 9</b>   |              |           |            |              |
| <b>City</b>              | <b>Jenner</b>       | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95450</b> |
| <b>Phone #</b>           | <b>707-865-2651</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> | <b>512.05</b>       |              |           |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Kensington Fire Protection District**

|                          |                           |              |                     |            |              |
|--------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>215 Arlington Ave.</b> |              |                     |            |              |
| <b>City</b>              | <b>Kensington</b>         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94707</b> |
| <b>Phone #</b>           | <b>510-526-1026</b>       | <b>Fax</b>   | <b>510-526-1026</b> |            |              |
| <b>Emergency Number</b>  |                           |              |                     |            |              |
| <b>Radio Frequencies</b> |                           |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**     **Kentfield Fire Protection District**

|                          |                                     |              |           |            |              |
|--------------------------|-------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1004 Sir Francis Drake Blvd.</b> |              |           |            |              |
| <b>City</b>              | <b>Kentfield</b>                    | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94904</b> |
| <b>Phone #</b>           | <b>415-453-7464</b>                 | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                     |              |           |            |              |
| <b>Radio Frequencies</b> | <b>46.60</b>                        |              |           |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**    **Knights Landing Volunteer Fire Dept.**

**Address**    **6th & Grove Streets - P.O. Box 578**  
**City**        **Knights Landing**                      **State**    **CA**                      **Zip**    **95645**

**Phone #**    **916-735-6409**                      **Fax**  
**Emergency Number**  
**Radio Frequencies**                      **154.280, 154.445**

|                  |                |                         |
|------------------|----------------|-------------------------|
| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b> | <b>1</b>       |                         |

---

**Organization**    **Larkspur Fire Department**

**Address**    **400 Magnolia Ave.**  
**City**        **Larkspur**                      **State**    **CA**                      **Zip**    **94939**

**Phone #**    **415-927-5011**                      **Fax**    **415-927-5009**  
**Emergency Number**  
**Radio Frequencies**                      **46.40**

|                  |                |                         |
|------------------|----------------|-------------------------|
| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization**    **Los Altos Fire Department**

**Address**    **10 Almond Ave.**  
**City**        **Los Altos**                      **State**    **CA**                      **Zip**    **94022**

**Phone #**    **415-948-2404**                      **Fax**    **415-949-2692**  
**Emergency Number**  
**Radio Frequencies**                      **153.830, 153.845, 154.265, 154.280, 154.295, 154.400**

|                         |                                  |                |
|-------------------------|----------------------------------|----------------|
| <b>Resources</b>        | <b>Alternate #: 415-948-0851</b> | <b>Section</b> |
| <b>Fire Departments</b> | <b>Area/Zone</b>                 | <b>1</b>       |

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|                          |                                           |              |                     |            |                         |
|--------------------------|-------------------------------------------|--------------|---------------------|------------|-------------------------|
| <b>Address</b>           | <b>P.O. Box 1029</b>                      |              |                     |            |                         |
| <b>City</b>              | <b>Mill Valley</b>                        | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94942</b>            |
| <b>Phone #</b>           | <b>415-388-4231</b>                       | <b>Fax</b>   | <b>415-388-5769</b> |            |                         |
| <b>Emergency Number</b>  |                                           |              |                     |            |                         |
| <b>Radio Frequencies</b> | <b>46.0800, 46.1200, 46.4600, 46.5000</b> |              |                     |            |                         |
| <b>Resources</b>         |                                           |              | <b>Section</b>      |            | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                           |              | <b>1</b>            |            |                         |

|                          |                                            |              |                     |            |                         |
|--------------------------|--------------------------------------------|--------------|---------------------|------------|-------------------------|
| <b>Address</b>           | <b>511 Magnolia Ave.</b>                   |              |                     |            |                         |
| <b>City</b>              | <b>Millbrae</b>                            | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94030</b>            |
| <b>Phone #</b>           | <b>415-259-2400</b>                        | <b>Fax</b>   | <b>415-259-2442</b> |            |                         |
| <b>Emergency Number</b>  |                                            |              |                     |            |                         |
| <b>Radio Frequencies</b> | <b>153.950, 154.280, 154.265, 154.295,</b> |              |                     |            |                         |
| <b>Resources</b>         |                                            |              | <b>Section</b>      |            | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                                            |              | <b>1</b>            |            |                         |

|                           |                           |              |                     |                |                         |
|---------------------------|---------------------------|--------------|---------------------|----------------|-------------------------|
| <b>Address</b>            | <b>777 S. Main Street</b> | <b>State</b> | <b>CA</b>           | <b>Zip</b>     | <b>95035</b>            |
| <b>City</b>               | <b>Milpitas</b>           |              |                     |                |                         |
| <b>Phone #</b>            | <b>408-942-2383</b>       | <b>Fax</b>   | <b>408-263-7836</b> |                |                         |
| <b>Emergency Number</b>   |                           |              |                     |                |                         |
| <b>Radio Frequencies</b>  | <b>460.625</b>            |              |                     |                |                         |
| <b>White Fire 1, 2, 3</b> |                           |              |                     |                |                         |
| <b>Resources</b>          |                           |              |                     | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>          |                           |              |                     | <b>1</b>       |                         |



|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 218</b> |              |           |            |              |
| <b>City</b>              | <b>Monte Rio</b>    | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95462</b> |
| <b>Phone #</b>           | <b>707-865-2067</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Moraga Fire Department

|                          |                        |              |                     |            |              |
|--------------------------|------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1280 Moraga Way</b> |              |                     |            |              |
| <b>City</b>              | <b>Moraga</b>          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94556</b> |
| <b>Phone #</b>           | <b>510-376-5454</b>    | <b>Fax</b>   | <b>510-631-0242</b> |            |              |
| <b>Emergency Number</b>  |                        |              |                     |            |              |
| <b>Radio Frequencies</b> |                        |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Mountain View Fire Department**

|                          |                          |              |                     |            |              |
|--------------------------|--------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1000 Villa Street</b> |              |                     |            |              |
| <b>City</b>              | <b>Mountain View</b>     | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94041</b> |
| <b>Phone #</b>           | <b>415-903-6365</b>      | <b>Fax</b>   | <b>415-903-6122</b> |            |              |
| <b>Emergency Number</b>  |                          |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>154.995, 154.025</b>  |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|



|                          |                                          |              |                     |            |              |
|--------------------------|------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>37101 Newark Blvd.</b>                |              |                     |            |              |
| <b>City</b>              | <b>Newark</b>                            | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94560</b> |
| <b>Phone #</b>           | <b>510-793-1400</b>                      | <b>Fax</b>   | <b>510-790-7281</b> |            |              |
| <b>Emergency Number</b>  |                                          |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>488.6125, 491-6125, 154.7, 154.28</b> |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**     **Nicasio Volunteer Fire Department**

|                          |                     |              |           |                  |
|--------------------------|---------------------|--------------|-----------|------------------|
| <b>Address</b>           | <b>P.O. Box 791</b> |              |           |                  |
| <b>City</b>              | <b>Nicasio</b>      | <b>State</b> | <b>CA</b> | <b>Zip 94946</b> |
| <b>Phone #</b>           | <b>415-662-2221</b> | <b>Fax</b>   |           |                  |
| <b>Emergency Number</b>  |                     |              |           |                  |
| <b>Radio Frequencies</b> |                     |              |           |                  |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization      Novato Fire Protection District**

|                           |                           |              |                     |            |              |
|---------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>            | <b>7025 Redwood Blvd.</b> |              |                     |            |              |
| <b>City</b>               | <b>Novato</b>             | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94945</b> |
| <b>Phone #</b>            | <b>415-892-1513</b>       | <b>Fax</b>   | <b>415-898-3426</b> |            |              |
| <b>Emergency Number</b>   |                           |              |                     |            |              |
| <b>Radio Frequencies</b>  | <b>46.36, 156.075</b>     |              |                     |            |              |
| <b>White Fire 1, 2, 3</b> |                           |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

|                          |                                        |              |                     |            |              |
|--------------------------|----------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1605 Martin Luther King Jr. Way</b> |              |                     |            |              |
| <b>City</b>              | <b>Oakland</b>                         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94612</b> |
| <b>Phone #</b>           | <b>510-444-3322</b>                    | <b>Fax</b>   | <b>510-238—2284</b> |            |              |
| <b>Emergency Number</b>  | <b>510-444-1616</b>                    |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>154.280</b>                         |              |                     |            |              |

|                              |                                   |
|------------------------------|-----------------------------------|
| <b>Resources</b>             | <b>Dispatch Fax: 510-238-2283</b> |
| <b>tion Fire Departments</b> | <b>Area/Zone 1</b>                |

**Organization**     **Oakland International Airport Fire Department**

|                          |                                 |              |                     |            |              |
|--------------------------|---------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>#1 Airport Drive, Box 45</b> |              |                     |            |              |
| <b>City</b>              | <b>Oakland</b>                  | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94621</b> |
| <b>Phone #</b>           | <b>510-577-4000</b>             | <b>Fax</b>   | <b>510-577-4101</b> |            |              |
| <b>Emergency Number</b>  |                                 |              |                     |            |              |
| <b>Radio Frequencies</b> |                                 |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization      Oakley Fire Protection District**

|                          |                            |              |                     |            |              |
|--------------------------|----------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>215 Second Street</b>   |              |                     |            |              |
| <b>City</b>              | <b>Oakley</b>              | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94561</b> |
| <b>Phone #</b>           | <b>510-625-2119</b>        | <b>Fax</b>   | <b>510-625-8409</b> |            |              |
| <b>Emergency Number</b>  |                            |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>46.10, 46.18, 46.24</b> |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization      Orinda Fire Protection District**

**Address** 33 Orinda Way  
**City** Orinda **State** CA **Zip** 94563

**Phone #** 510-254-1100 **Fax** 510-254-8726  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

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**Organization** Pacifica Fire Department

**Address** 170 Santa Maria Ave.  
**City** Pacifica **State** CA **Zip** 94044

**Phone #** 415-738-7361 **Fax** 415-355-1172  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

---

**Organization** Palo Alto Fire Department

**Address** 250 Hamilton Drive  
**City** Palo Alto **State** CA **Zip**

**Phone #** 415-329-2424 **Fax** 415-329-2299  
**Emergency Number**  
**Radio Frequencies** 154.445

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

---

**Organization** Petaluma Fire Department

**Address** 198 D Street  
**City** Petaluma **State** CA **Zip** 94952  
**Phone #** 707-778-4390 **Fax** 707-762-9547  
**Emergency Number**  
**Radio Frequencies** 154.025

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

**Organization** Piedmont Fire Department

**Address** 120 Vista Avenue  
**City** Piedmont **State** CA **Zip** 94611  
**Phone #** 510-420-3030 **Fax** 510-653-8272  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Fire Departments**  
**Area/Zone** 2

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**Organization** Pinole Fire Protection District

**Address** 880 Tennent Ave.  
**City** Pinole **State** CA **Zip** 94564  
**Phone #** 510-724-8970 **Fax** 510-724-9061  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

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**Organization** Pleasant Fire Department

**Address** P.O. Box 520  
**City** Pleasanton **State** CA **Zip** 94566

**Phone #** 510-484-8114 **Fax** 510-484-8178

**Emergency Number**

**Radio Frequencies** 154.070, 154.235, 154.280

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

---

**Organization** Presidio of San Francisco Fire Department

**Address** Bldg. 218, Headquarters  
**City** San Francisco **State** CA **Zip** 94129

**Phone #** 415-561-3914 **Fax** 415-561-6149

**Emergency Number**

**Radio Frequencies** 150.425, 149.700

**Resources** **Section** **Fire Departments**  
**Area/Zone** 1

---

**Organization** Redwood City Fire Department

**Address** 755 Marshall Street  
**City** Redwood City **State** CA **Zip** 94063

**Phone #** 415-780-7400 **Fax** 415-780-7461

**Emergency Number** 415-368-1421

**Radio Frequencies** 153.890, 154.265, 154.295, 154.280

**Resources** **24 Hours: 415-368-1423** **Section**  
**Fire Departments** **Area/Zone** 2

---

**Organization** Richmond Fire Department

**Address** 330 25th Street  
**City** Richmond **State** CA **Zip** 94804  
**Phone #** 510-307-8031 **Fax** 510-307-8048  
**Emergency Number**  
**Radio Frequencies** 154.385, 154.280, 46.06, 46.10,  
**Resources** **24 Hours: 510-620-6901**  
**Cellular: 510-409-0849** **Section** **Fire Departments** **Area/Zone**  
**2**

---

**Organization** Riverview Fire Protection District

**Address** 1500 W. Fourth Street  
**City** Antioch **State** CA **Zip** 94509  
**Phone #** 510-757-1303 **Fax** 510-754-8852  
**Emergency Number**  
**Radio Frequencies** 154.385, 154.205, 154.280, 46.10, 46.38  
**Resources** **24 Hours: 510-778-2441** **Section**  
**Fire Departments** **Area/Zone** **1**

---

**Organization** Ross Valley Fire Department

**Address** 777 San Anselmo Ave.  
**City** San Anselmo **State** CA **Zip** 94960  
**Phone #** 415-258-4686 **Fax**  
**Emergency Number**  
**Radio Frequencies** 33.84, 37.10, 46.08, 46.12, 46.36, 46.40, 46.46, 46.50, 154.28  
**Resources** **Section** **Fire Departments**  
**Area/Zone** **2**

---

**Organization** Ryer Fire Protection District



**Address** 9495 State Hwy. 220  
**City** Walnut Grove **State** CA **Zip** 95690

**Phone #** 916-775-1252 **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Fire Departments**  
**Area/Zone** 3

---

**Organization** Sacramento City Fire Department

**Address** 1231 "I" Street, Room 401  
**City** Sacramento **State** CA **Zip** 95814

**Phone #** 916-449-5266 **Fax** 916-449-2006  
**Emergency Number**  
**Radio Frequencies** 153.89, 153.95, 154.280

**Resources** **24 Hours: 916-449-5031** **Section**  
**Fire Departments** **Area/Zone** 3

---

**Organization** Sacramento County Fire Protection District

**Address** 3121 Gold Canal Drive  
**City** Rancho Cordova **State** CA **Zip** 95670

**Phone #** 916-636-1800 **Fax** 916-638-0914  
**Emergency Number**  
**Radio Frequencies** 154.190, 154.280, 154.325, 154.430

**Resources** **24 Hours: 916-366-1516** **Section**  
**Fire Departments** **Area/Zone** 1

---

**Organization** San Bruno Fire Department

**Address** 55 El Camino Real  
**City** San Bruno **State** CA **Zip** 94066

**Phone #** 415-877-8996 **Fax** 415-873-6749

**Emergency Number**

**Radio Frequencies** 154.040

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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**Organization** San Francisco Fire Department

**Address** 260 Golden Gate Ave.  
**City** San Francisco **State** CA **Zip** 94102

**Phone #** 415-861-8000 **Fax** 415-431-9655

**Emergency Number** 415-861-8020

**Radio Frequencies** 491.3625, 491.5625, 491.7625, 492.1625, 492.1875, 154.28

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>3</b>       |                         |

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**Organization** San Joaquin County Delta FPD

**Address** 1810 East Hazelton Ave.  
**City** Stockton **State** CA **Zip** 95205

**Phone #** 209-468-3133 **Fax**

**Emergency Number**

**Radio Frequencies** 154.0700, 154.13000, 154.28000

| <b>Resources</b>       | <b>209-331-7515</b> | <b>Section</b> | <b>Fire Depart-</b> |
|------------------------|---------------------|----------------|---------------------|
| <b>ments Area/Zone</b> |                     | <b>1</b>       |                     |

---





|                           |                          |              |                     |                |                         |
|---------------------------|--------------------------|--------------|---------------------|----------------|-------------------------|
| <b>Address</b>            | <b>777 Benton Street</b> |              |                     |                |                         |
| <b>City</b>               | <b>Santa Clara</b>       | <b>State</b> | <b>CA</b>           | <b>Zip</b>     | <b>95050</b>            |
| <b>Phone #</b>            | <b>408-984-3053</b>      | <b>Fax</b>   | <b>408-241-3006</b> |                |                         |
| <b>Emergency Number</b>   |                          |              |                     |                |                         |
| <b>Radio Frequencies</b>  | <b>154.025,</b>          |              |                     |                |                         |
| <b>White Fire 1, 2, 3</b> |                          |              |                     |                |                         |
| <b>154.845</b>            |                          |              |                     |                |                         |
| <b>Resources</b>          |                          |              |                     | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>          |                          |              |                     | <b>1</b>       |                         |

|                          |                           |                           |                     |                         |              |
|--------------------------|---------------------------|---------------------------|---------------------|-------------------------|--------------|
| <b>Address</b>           | <b>333 Johnson Street</b> |                           |                     |                         |              |
| <b>City</b>              | <b>Sausalito</b>          | <b>State</b>              | <b>CA</b>           | <b>Zip</b>              | <b>94965</b> |
| <b>Phone #</b>           | <b>415-289-4150</b>       | <b>Fax</b>                | <b>415-289-4167</b> |                         |              |
| <b>Emergency Number</b>  |                           |                           |                     |                         |              |
| <b>Radio Frequencies</b> |                           | <b>Fire Control: CH 6</b> |                     |                         |              |
| <b>Marine: 16, 22</b>    |                           |                           |                     |                         |              |
| <b>Resources</b>         |                           |                           | <b>Section</b>      | <b>Fire Departments</b> |              |
| <b>Area/Zone</b>         |                           |                           | <b>1</b>            |                         |              |

|                          |                            |              |                |            |                         |
|--------------------------|----------------------------|--------------|----------------|------------|-------------------------|
| <b>Address</b>           | <b>17290 Skyline Blvd.</b> | <b>State</b> | <b>CA</b>      | <b>Zip</b> | <b>94062</b>            |
| <b>City</b>              | <b>Woodside</b>            |              |                |            |                         |
| <b>Phone #</b>           | <b>415-851-1860</b>        | <b>Fax</b>   |                |            |                         |
| <b>Emergency Number</b>  |                            |              |                |            |                         |
| <b>Radio Frequencies</b> |                            |              |                |            |                         |
| <b>Resources</b>         |                            |              | <b>Section</b> |            | <b>Fire Departments</b> |

|                   |                                              |                                      |              |                  |       |
|-------------------|----------------------------------------------|--------------------------------------|--------------|------------------|-------|
| Area/Zone         |                                              | 1                                    |              |                  |       |
|                   |                                              |                                      |              |                  |       |
| Organization      | Skywal ker Ranch Fire Brigade                |                                      |              |                  |       |
| Address           | 5858 Lucas Valley Road                       |                                      |              |                  |       |
| City              | Nicasio                                      | State                                | CA           | Zip              | 94946 |
| Phone #           | 415-662-1800                                 | Fax                                  | 415-662-2060 |                  |       |
| Emergency Number  |                                              |                                      |              |                  |       |
| Radio Frequencies |                                              | Channels: 6, 4, 13, Red, Blue, White |              |                  |       |
| Resources         |                                              | Section                              |              | Fire Departments |       |
| Area/Zone         |                                              | 2                                    |              |                  |       |
|                   |                                              |                                      |              |                  |       |
| Organization      | Solano County Fire Warden                    |                                      |              |                  |       |
| Address           | 600 Texas Street                             |                                      |              |                  |       |
| City              | Fairfield                                    | State                                | CA           | Zip              | 94533 |
| Phone #           | 707-421-6330                                 | Fax                                  | 707-421-6330 |                  |       |
| Emergency Number  |                                              |                                      |              |                  |       |
| Radio Frequencies |                                              |                                      |              |                  |       |
| Resources         |                                              | Section                              |              | Fire Departments |       |
| Area/Zone         |                                              | 1                                    |              |                  |       |
|                   |                                              |                                      |              |                  |       |
| Organization      | Sonoma County Department of Fire Services    |                                      |              |                  |       |
| Address           | 2300 County Center Drive, Suite 221, Bldg. A |                                      |              |                  |       |
| City              | Santa Rosa                                   | State                                | CA           | Zip              | 95403 |
| Phone #           | 707-527-1152                                 | Fax                                  | 707-527-1152 |                  |       |
| Emergency Number  |                                              |                                      |              |                  |       |
| Radio Frequencies |                                              | 154.145                              |              |                  |       |
| Resources         |                                              | 24 Hour Dispatch: 707-576-           |              |                  |       |
| 1371Section       | Fire Departments                             |                                      | Area/Zone    |                  |       |
| 1                 |                                              |                                      |              |                  |       |

**Organization**     **South County Fire Authority**

**Address**     **666 Elm Street**

**City**     **San Carlos**     **State**     **CA**     **Zip**     **94070**

**Phone #**     **415-593-8011**     **Fax**     **415-592-4714**

**Emergency Number**

**Radio Frequencies**     **White Fire 1, 2, 3**  
**156.075**

**Resources**

**Cellular: 415-519-0102 /0108**

**Hazmat Van: 415-591-4790****Section**  
**1**

**Fire Departments**     **Area/Zone**

---

**Organization**     **South San Francisco Fire Department**

**Address**     **33 Arroyo Drive Suite "F"**

**City**     **S. San Francisco**     **State**     **CA**     **Zip**     **94080**

**Phone #**     **415-877-8950**     **Fax**     **415-872-2047**

**Emergency Number**

**Radio Frequencies**     **154.010, 154.265, 154.295, 154.28**

**Resources**

**24 Hours: 415-877-8670****Section**

**Fire Departments**

**Area/Zone**     **1**

---

**Organization**     **Stinson Beach Fire Protection District**

**Address**     **P.O. Box 144**

**City**     **Stinson Beach**     **State**     **CA**     **Zip**     **94970**

**Phone #**     **415-868-0434**     **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

**Organization**     **Stockton (Airport) Fire Department**

**Address**     **5000 South Airport**

**City**             **Stockton**                             **State**     **CA**                             **Zip**     **95206**

**Phone #**     **209-468-4722**                             **Fax**

**Emergency Number**

**Radio Frequencies**             **460.625, 460.575, 154.280, 155.025, 154.130**

|                  |                |                         |
|------------------|----------------|-------------------------|
| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b> | <b>3</b>       |                         |

---

**Organization**     **Stockton Fire Department**

**Address**     **425 N. El Dorado Street**

**City**             **Stockton**                             **State**     **CA**                             **Zip**     **95202**

**Phone #**     **209-944-8271**                             **Fax**     **209-463-1550**

**Emergency Number**

**Radio Frequencies**             **460.625, 460.575**

**Marine Ch: 16, 18**

|                               |                                          |
|-------------------------------|------------------------------------------|
| <b>Resources</b>              | <b>Alternate #: 209-944-8802</b>         |
| <b>24 Hours: 209-464-4650</b> | <b>Section</b>                           |
| <b>2</b>                      | <b>Fire Departments</b> <b>Area/Zone</b> |

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**Organization**     **Suisan City Fire Department**

**Address**     **621 Pintail Drive**

**City**             **Suisan City**                             **State**     **CA**                             **Zip**     **94585**

**Phone #**     **707-425-9133**                             **Fax**     **707-421-7398**

**Emergency Number**

**Radio Frequencies**

|                  |                |                         |
|------------------|----------------|-------------------------|
| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b> | <b>2</b>       |                         |

---



|                          |                                  |              |              |
|--------------------------|----------------------------------|--------------|--------------|
| <b>Address</b>           | <b>445 Jackson Street</b>        |              |              |
| <b>City</b>              | <b>Fairfield</b>                 | <b>State</b> | <b>CA</b>    |
|                          |                                  | <b>Zip</b>   | <b>94533</b> |
| <b>Phone #</b>           | <b>707-425-3605</b>              | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                  |              |              |
| <b>Radio Frequencies</b> | <b>158.820, 154.175, 154.205</b> |              |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Sunnyvale Dept. of Public Safety

|                          |                                               |              |                     |            |              |
|--------------------------|-----------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 60607</b>                         |              |                     |            |              |
| <b>City</b>              | <b>Sunnyvale</b>                              | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94088</b> |
| <b>Phone #</b>           | <b>408-730-7100</b>                           | <b>Fax</b>   | <b>408-773-8810</b> |            |              |
| <b>Emergency Number</b>  |                                               |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>482.9625, 183.1625, 485.1425, 485.7125</b> |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization Thornton Fire Protection District**

|                          |                     |              |           |                  |
|--------------------------|---------------------|--------------|-----------|------------------|
| <b>Address</b>           | <b>P.O. Box 193</b> |              |           |                  |
| <b>City</b>              | <b>Thornton</b>     | <b>State</b> | <b>CA</b> | <b>Zip 95686</b> |
| <b>Phone #</b>           | <b>209-794-2460</b> | <b>Fax</b>   |           |                  |
| <b>Emergency Number</b>  |                     |              |           |                  |
| <b>Radio Frequencies</b> |                     |              |           |                  |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization Tiburon Fire Department**

**Address 1679 Tiburon Blvd.**

**City Tiburon State CA Zip 94920**

**Phone # 415-435-7200**

**Fax**

**Emergency Number**

**Radio Frequencies 46.20, 46.28, 46.36, 46.40, 46.46, 46.50, 46.80, 151.625, 151.280, 151.295, 151.310, 151.340, 151.355, 151.445, 151.460, 154.280, 154.295**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>3</b>       |                         |

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**Organization Tracy Fire Department**

**Address 835 Central Ave.**

**City Tracy State CA Zip 95376**

**Phone # 209-835-2525**

**Fax**

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>3</b>       |                         |

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**Organization Tracy Rural Fire Protection District**

**Address 22484 S. 7th Street**

**City Tracy State CA Zip 95376**

**Phone # 209-835-1883**

**Fax**

**Emergency Number**

**Radio Frequencies 155.055, 154.310, 153.959**

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>2</b>       |                         |

---

|                          |                                      |                 |                     |            |                   |
|--------------------------|--------------------------------------|-----------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>481 Broadway St., 60 SPTG/CEF</b> |                 |                     |            |                   |
| <b>City</b>              | <b>Travis AFB</b>                    | <b>State</b>    | <b>CA</b>           | <b>Zip</b> | <b>94535-2005</b> |
| <b>Phone #</b>           | <b>707-424-3886</b>                  | <b>Fax</b>      | <b>707-424-0600</b> |            |                   |
| <b>Emergency Number</b>  |                                      |                 |                     |            |                   |
| <b>Radio Frequencies</b> |                                      | <b>173.5625</b> |                     |            |                   |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Two Rock Coast Guard Fire Department

|                          |                                    |              |                     |            |              |
|--------------------------|------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>Coast Guard Training Center</b> |              |                     |            |              |
| <b>City</b>              | <b>Petaluma</b>                    | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94952</b> |
| <b>Phone #</b>           | <b>707-765-7355</b>                | <b>Fax</b>   | <b>707-765-7339</b> |            |              |
| <b>Emergency Number</b>  |                                    |              |                     |            |              |
| <b>Radio Frequencies</b> |                                    |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>3 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** U.S.N.S. Rough & Ready Island, Comm. Sta. Fire Dept.

|                                           |                     |                           |                     |            |                   |
|-------------------------------------------|---------------------|---------------------------|---------------------|------------|-------------------|
| <b>Address</b>                            | <b>Bldg. 117</b>    |                           |                     |            |                   |
| <b>City</b>                               | <b>Stockton</b>     | <b>State</b>              | <b>CA</b>           | <b>Zip</b> | <b>95203-5000</b> |
| <b>Phone #</b>                            | <b>209-944-0202</b> | <b>Fax</b>                | <b>209-944-0344</b> |            |                   |
| <b>Emergency Number</b>                   |                     |                           |                     |            |                   |
| <b>Radio Frequencies</b>                  |                     | <b>White Fire 1, 2, 3</b> |                     |            |                   |
| <b>142.000, 142.075, 157.100, 156.800</b> |                     |                           |                     |            |                   |

| Resources       | 24 Hours: 209-944-0333;    |
|-----------------|----------------------------|
| DispatchSection | Fire Departments Area/Zone |
| 3               |                            |

**Organization** U.S. Naval Comm. Station Fire Department

**Address** Bldg. 117, Rough and Ready Island  
**City** Stockton **State** CA **Zip** 95203

**Phone #** 209-944-0202 **Fax**  
**Emergency Number** Extension 333  
**Radio Frequencies** 144.000, 142.075, 142.750

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>2</b>       |                         |

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**Organization** U.S. Naval Shipyard Mare Island Fire Department

**Address** Bldg. 127 Code 1724  
**City** Vallejo **State** CA **Zip** 94592

**Phone #** 707-646-4700 **Fax** 707-646-0174  
**Emergency Number** 707-646-3333  
**Radio Frequencies** 138.700, 140.025, 154.340

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

---

**Organization** U.S. Naval Station Fire Department

**Address** Bldg. #157 Treasure Island  
**City** San Francisco **State** CA **Zip** 94130

**Phone #** 415-395-5646 **Fax** 415-395-5391  
**Emergency Number**  
**Radio Frequencies** 140.300, 148.975

| <b>Resources</b> | <b>Section</b> | <b>Fire Departments</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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|                          |                                                            |                         |                     |            |              |
|--------------------------|------------------------------------------------------------|-------------------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>Flee &amp; Indust. S.C. Oakland, Bldg. 410, Code 32</b> |                         |                     |            |              |
| <b>City</b>              | <b>Oakland</b>                                             | <b>State</b>            | <b>CA</b>           | <b>Zip</b> | <b>94625</b> |
| <b>Phone #</b>           | <b>510-302-6421</b>                                        | <b>Fax</b>              | <b>510-302-5078</b> |            |              |
| <b>Emergency Number</b>  |                                                            |                         |                     |            |              |
| <b>Radio Frequencies</b> |                                                            | <b>142.600, 142.825</b> |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** U.S. Naval Weapons Station Fire Department

|                          |                                 |                         |           |            |              |
|--------------------------|---------------------------------|-------------------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Fire Department Code 104</b> |                         |           |            |              |
| <b>City</b>              | <b>Concord</b>                  | <b>State</b>            | <b>CA</b> | <b>Zip</b> | <b>94520</b> |
| <b>Phone #</b>           | <b>510-246-2074</b>             | <b>Fax</b>              |           |            |              |
| <b>Emergency Number</b>  |                                 |                         |           |            |              |
| <b>Radio Frequencies</b> |                                 | <b>139.500, 154.280</b> |           |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Union City Fire Department**

|                          |                                  |              |                     |            |              |
|--------------------------|----------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>34009 Alvarado-Niles Road</b> |              |                     |            |              |
| <b>City</b>              | <b>Union City</b>                | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94587</b> |
| <b>Phone #</b>           | <b>510-471-1424</b>              | <b>Fax</b>   | <b>510-475-7318</b> |            |              |
| <b>Emergency Number</b>  |                                  |              |                     |            |              |
| <b>Radio Frequencies</b> |                                  |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Fire Departments |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

|                          |                           |                |            |                         |
|--------------------------|---------------------------|----------------|------------|-------------------------|
| <b>Address</b>           | <b>Coast Guard Island</b> |                |            |                         |
| <b>City</b>              | <b>Alameda</b>            | <b>State</b>   | <b>Zip</b> | <b>94501-5100</b>       |
| <b>Phone #</b>           | <b>510-437-3205</b>       | <b>Fax</b>     |            |                         |
| <b>Emergency Number</b>  |                           |                |            |                         |
| <b>Radio Frequencies</b> | <b>171.3625, 171.2375</b> |                |            |                         |
| <b>Resources</b>         |                           | <b>Section</b> |            | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                           | <b>2</b>       |            |                         |

|                          |                                             |              |                     |                  |                     |
|--------------------------|---------------------------------------------|--------------|---------------------|------------------|---------------------|
| <b>Address</b>           | <b>1220 Marin Street</b>                    | <b>State</b> | <b>CA</b>           | <b>Zip</b>       | <b>94590</b>        |
| <b>City</b>              | <b>Vallejo</b>                              |              |                     |                  |                     |
| <b>Phone #</b>           | <b>707-648-4526</b>                         | <b>Fax</b>   | <b>707-648-5289</b> |                  |                     |
| <b>Emergency Number</b>  |                                             |              |                     |                  |                     |
| <b>Radio Frequencies</b> | <b>482.9875, 485.9875, 154.280, 154.340</b> |              |                     |                  |                     |
| <b>Resources</b>         |                                             |              |                     | <b>24 Hours:</b> | <b>707-648-4321</b> |
| <b>Fire Departments</b>  |                                             |              |                     | <b>Area/Zone</b> | <b>1</b>            |

|                          |                     |              |           |                |                         |
|--------------------------|---------------------|--------------|-----------|----------------|-------------------------|
| <b>Address</b>           | <b>P.O. Box 468</b> |              |           |                |                         |
| <b>City</b>              | <b>Valley Ford</b>  | <b>State</b> | <b>CA</b> | <b>Zip</b>     | <b>94972</b>            |
| <b>Phone #</b>           | <b>700-876-3123</b> | <b>Fax</b>   |           |                |                         |
| <b>Emergency Number</b>  |                     |              |           |                |                         |
| <b>Radio Frequencies</b> |                     |              |           |                |                         |
| <b>Resources</b>         |                     |              |           | <b>Section</b> | <b>Fire Departments</b> |
| <b>Area/Zone</b>         |                     |              |           | <b>2</b>       |                         |

**Organization**    **West County Fire Protection District**

**Address**    **330 25th Street**

**City**        **Richmond**

**State**    **CA**

**Zip**        **94804**

**Phone #**    **510-620-6990**

**Fax**        **510-620-6716**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Fire Departments**

**Area/Zone**

**3**

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**Organization**    **West Sacramento Fire Department**

**Address**    **1751 Cebrian Street**

**City**        **West Sacramento**

**State**    **CA**

**Zip**        **95691**

**Phone #**    **916-373-5840**

**Fax**        **916-373-5017**

**Emergency Number**

**Radio Frequencies**        **154.445**

**Resources**

**24 Hours: 916-373-5842**

**Fire Departments**

**Section**  
**Area/Zone**    **1**

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**Organization**    **Woodside Fire Protection District**

**Address**    **3111 Woodside Road**

**City**        **Woodside**

**State**    **CA**

**Zip**        **94062**

**Phone #**    **415-851-1594**

**Fax**

**Emergency Number**

**Radio Frequencies**        **153.890, 154.280**

**Resources**

**Section**

**Emergency Medical**

**Services** **Area/Zone**

**1**

---







**Organization**    **San Francisco County EMS**

**Address**    **1540 Market Street, Suite 220**

**City**        **San Francisco**                      **State**   **CA**                      **Zip**    **94102**

**Phone #**    **415-554-9960**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**206-7870Section**

**Zone**        **3**

**After hours: Call CM90 at 415-**

**Emergency Medical Services Area/**

---

**Organization**    **San Joaquin County EMS**

**Address**    **P.O. Box 1020**

**City**        **Stockton**                      **State**   **CA**                      **Zip**    **95201**

**Phone #**    **209-468-6818**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Services Area/Zone**

**Section**

**1**

**Emergency Medical**

---

**Organization**    **San Mateo County EMS**

**Address**    **225 West 37th Ave.**

**City**        **San Mateo**                      **State**   **CA**                      **Zip**    **94403**

**Phone #**    **415-573-2564**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Services Area/Zone**

**Section**

**1**

**Emergency Medical**

**Organization** Santa Clara County EMS

**Address** 645 South Bascom, Room 141

**City** San Jose **State** CA **Zip** 95128

**Phone #** 408-299-5832 **Fax**

**Emergency Number**

**Radio Frequencies**

|                           |                |                          |
|---------------------------|----------------|--------------------------|
| <b>Resources</b>          | <b>Section</b> | <b>Emergency Medical</b> |
| <b>Services Area/Zone</b> | <b>2</b>       |                          |

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**Organization** Solano County EMS

**Address** 717 Missouri Street, Suite B

**City** Fairfield **State** CA **Zip** 94553

**Phone #** 707-421-6685 **Fax**

**Emergency Number**

**Radio Frequencies**

|                           |                |                          |
|---------------------------|----------------|--------------------------|
| <b>Resources</b>          | <b>Section</b> | <b>Emergency Medical</b> |
| <b>Services Area/Zone</b> | <b>1</b>       |                          |

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**Organization** Sonoma County EMS

**Address** 3313 Chanate Road

**City** Santa Rosa **State** CA **Zip** 9544

**Phone #** 707-576-4701 **Fax** 707-576-4694

**Emergency Number**

**Radio Frequencies**

|                                   |                                  |                |
|-----------------------------------|----------------------------------|----------------|
| <b>Resources</b>                  | <b>After hours: 707-528-4192</b> | <b>Section</b> |
| <b>Emergency Medical Services</b> | <b>Area/Zone</b>                 | <b>2</b>       |

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**Organization**    **Yolo County EMS**

**Address**    **3856 Taylor Road, Suite G**

**City**        **Loomis**

**State**   **CA**

**Zip**       **95650**

**Phone #**   **916-652-3690**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Harbormasters**

**Section**

**Area/Zone**

**Port Authority and**

**1**

---

**Organization**    **Alameda Harbor Master**

**Address**    **1815 Clement Ave.**

**City**        **Alameda**

**State**   **CA**

**Zip**       **94501**

**Phone #**   **510-521-1133**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Harbormasters**

**Section**

**Area/Zone**

**Port Authority and**

**2**

---

**Organization**    **Benicia PortTerminal**

**Address**    **P.O. Box 315**

**City**        **Benicia**

**State**   **CA**

**Zip**       **94510**

**Phone #**   **707-745-1572**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Harbormasters**

**Section**

**Area/Zone**

**Port Authority and**

**1**

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**Organization**    **Pillar Point Harbor Master**

**Address**    **1 Johnson Pier**  
**City**        **Half Moon Bay**                      **State**    **CA**                      **Zip**        **94019**

**Phone #**    **415-726-5727**                      **Fax**  
**Emergency Number**  
**Radio Frequencies**

|                      |                  |                           |
|----------------------|------------------|---------------------------|
| <b>Resources</b>     | <b>Section</b>   | <b>Port Authority and</b> |
| <b>Harbormasters</b> | <b>Area/Zone</b> | <b>1</b>                  |

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**Organization**    **Port of Oakland**

**Address**    **530 Water Street**  
**City**        **Oakland**                      **State**    **CA**                      **Zip**        **94607**

**Phone #**    **510-272-1184**                      **Fax**        **510-465-3755**  
**Emergency Number**  
**Radio Frequencies**

|                                    |                            |                  |             |
|------------------------------------|----------------------------|------------------|-------------|
| <b>Resources</b>                   | <b>Pager: 510-678-5664</b> | <b>Section</b>   | <b>Port</b> |
| <b>Authority and Harbormasters</b> |                            | <b>Area/Zone</b> | <b>1</b>    |

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**Organization**    **Port of Redwood City**

**Address**    **675 Seaport Blvd.**  
**City**        **Redwood City**                      **State**    **CA**                      **Zip**        **9463-2794**

**Phone #**    **415-360-4150**                      **Fax**        **415-369-7636**  
**Emergency Number**  
**Radio Frequencies**

|                      |                  |                           |
|----------------------|------------------|---------------------------|
| <b>Resources</b>     | <b>Section</b>   | <b>Port Authority and</b> |
| <b>Harbormasters</b> | <b>Area/Zone</b> | <b>2</b>                  |

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**Organization Port of Richmond**

**Address 1411 Harbour Way South**  
**City Richmond State CA Zip 94804**

**Phone # 510-215-4600 Fax 510-233-3105**  
**Emergency Number**  
**Radio Frequencies**

|                      |                  |                           |
|----------------------|------------------|---------------------------|
| <b>Resources</b>     | <b>Section</b>   | <b>Port Authority and</b> |
| <b>Harbormasters</b> | <b>Area/Zone</b> | <b>3</b>                  |

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**Organization Port of Sacramento**

**Address World Trade Center 2101 Stowe Blvd.**  
**City West Sacramento State CA Zip 95691**

**Phone # 916-371-8000 Fax 510-372-4802**  
**Emergency Number**  
**Radio Frequencies**

|                      |                  |                           |
|----------------------|------------------|---------------------------|
| <b>Resources</b>     | <b>Section</b>   | <b>Port Authority and</b> |
| <b>Harbormasters</b> | <b>Area/Zone</b> | <b>1</b>                  |

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**Organization Port of San Francisco**

**Address Ferry Building**  
**City San Francisco State CA Zip 94111**

**Phone # 415-274-0400 Fax 415-274-0528**  
**Emergency Number**  
**Radio Frequencies**

|                      |                  |                           |
|----------------------|------------------|---------------------------|
| <b>Resources</b>     | <b>Section</b>   | <b>Port Authority and</b> |
| <b>Harbormasters</b> | <b>Area/Zone</b> | <b>1</b>                  |

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**Organization**    **Port of San Francisco**

**Address**    **Ferry Building, Suite 3100**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**    **94111**

**Phone #**    **415-274-0400**

**Fax**        **415-274-0528**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Harbormasters**

**Section**

**Area/Zone**

**Port Authority and**

**3**

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**Organization**    **Port of Stockton**

**Address**    **2201 West Washington**

**City**        **Stockton**                      **State**    **CA**                      **Zip**    **95201-2089**

**Phone #**    **209-946-0246**

**Fax**        **209-465-7244**

**Emergency Number**

**Radio Frequencies**

**Resources**

**ciations**    **Area/Zone**

**Section**

**1**

**Marine Pilots Asso-**

---

**Organization**    **San Francisco Bar Pilots Association**

**Address**    **P.O. Box 26409**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**    **94111**

**Phone #**    **415-362-5436**

**Fax**        **415-982-4721**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fax: 415-393-0456**

**Section**  
**Zone**        **1**

**Dispatch: 415-393-0457**

**Marine Pilots Associations**    **Area/**

|                          |                           |              |                     |            |              |
|--------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>158 Greenfield, #A</b> |              |                     |            |              |
| <b>City</b>              | <b>San Rafael</b>         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94901</b> |
| <b>Phone #</b>           | <b>415-456-3744</b>       | <b>Fax</b>   | <b>415-456-0342</b> |            |              |
| <b>Emergency Number</b>  |                           |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>CH: 13, 16</b>         |              |                     |            |              |

**Resources** **Cellular: 415-571-5320**  
**Salvage Companies/ Divers** **Section Salvage Area/Zone 3**

|                     |                                     |
|---------------------|-------------------------------------|
| <b>Organization</b> | <b>Associated Divers and Towing</b> |
|---------------------|-------------------------------------|

|                          |                     |              |              |
|--------------------------|---------------------|--------------|--------------|
| <b>Address</b>           |                     |              |              |
| <b>City</b>              | <b>Sacramento</b>   | <b>State</b> | <b>CA</b>    |
|                          |                     | <b>Zip</b>   | <b>95832</b> |
| <b>Phone #</b>           | <b>916-929-3224</b> | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                     |              |              |
| <b>Radio Frequencies</b> |                     |              |              |

| Resources |           | Section | Salvage Companies/ |
|-----------|-----------|---------|--------------------|
| Divers    | Area/Zone | 1       |                    |

**Organization** Bishop Diving and Salvage

|                          |                                        |              |           |            |              |
|--------------------------|----------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>629 Bair Island Road, Suite 101</b> |              |           |            |              |
| <b>City</b>              | <b>Redwood City</b>                    | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94063</b> |
| <b>Phone #</b>           | <b>408-368-1808</b>                    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                        |              |           |            |              |
| <b>Radio Frequencies</b> |                                        |              |           |            |              |

**Resources** **Home: 408-523-7933** **Section** **Sal-**  
**vage Companies/ Divers** **Area/Zone** **1**



**Organization**    **Crowley Towing and Transportation**

**Address**    **101 California Street**

**City**        **San Francisco**

**State**   **CA**

**Zip**        **94111**

**Phone #**   **415-546-2500**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Salvage Companies/**

**Divers**    **Area/Zone**

**2**

---

**Organization**    **Delta Salvage Company**

**Address**    **4920 San Mound Blvd.**

**City**        **Bethel Island**

**State**   **CA**

**Zip**

**Phone #**   **510-684-2220**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Salvage Companies/**

**Divers**    **Area/Zone**

**2**

---

**Organization**    **DRS Marine Inc.**

**Address**    **1378 Lemon Street**

**City**        **Vallejo**

**State**   **CA**

**Zip**        **94590**

**Phone #**   **707-648-3843**

**Fax**        **707-644-2446**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Salvage Companies/**

**Divers**    **Area/Zone**

**1**

---

**Organization** Fred Devine Diving and Salvage

**Address** 6211 North Ensign

**City** Portland **State** OR **Zip**

**Phone #** 503-283-5285 **Fax** 503-286-2871

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b>        | <b>Section</b> | <b>Salvage Companies/</b> |
|-------------------------|----------------|---------------------------|
| <b>Divers</b> Area/Zone | 1              |                           |

**Organization** Global Diving and Salvage

**Address** 2763 13th Ave. South West

**City** Seattle **State** WA **Zip** 98134

**Phone #** 206-623-0621 **Fax** 206-340-8984

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b>        | <b>Section</b> | <b>Salvage Companies/</b> |
|-------------------------|----------------|---------------------------|
| <b>Divers</b> Area/Zone | 1              |                           |

**Organization** Global Phillips, CARTNAR/NAVSEA SUPSALV

**Address** Rough & Ready Island NAVSEA Bldg. 606

**City** Stockton **State** CA **Zip** 95203

**Phone #** 209-944-0536 **Fax** 703-607-2757

**Emergency Number**

**Radio Frequencies** Marine: CH 16

| <b>Resources</b>              | <b>24 Hours: 703-602-7527</b> | <b>SectionSal-</b> |
|-------------------------------|-------------------------------|--------------------|
| <b>vage Companies/ Divers</b> | <b>Area/Zone</b>              | <b>2</b>           |

**Organization** Inshore Divers

**Address** 2102C Kelley Court

**City** Pittsburg

**State** CA

**Zip** 94565

**Phone #** 510-439-7227

**Fax** 510-427-1705

**Emergency Number**

**Radio Frequencies**

**Resources**

**vage Companies/ Divers**

**24 Hours: 510-370-6979**

**SectionSal-  
Area/Zone 3**

---

**Organization** MCR

**Address** P.O. Box 306

**City** Rio Vista

**State** CA

**Zip** 94571

**Phone #** 707-374-5443

**Fax** 707-374-2728

**Emergency Number**

**Radio Frequencies**

**Resources**

**vage Companies/ Divers**

**Pager: 707-449-7341**

**Section Sal-  
Area/Zone 1**

---

**Organization** Oceaneering International Inc.

**Address** 116 E. Yanonali Street

**City** Santa Barbera

**State** CA

**Zip** 93101

**Phone #** 805-963-6507

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Divers Area/Zone**

**Section**

**1**

**Salvage Companies/**

---

**Organization Podesta Diving**

**Address Pier 26, The Embarcadero**  
**City San Francisco State CA Zip 94105**

**Phone # 415-495-3955 Fax 415-495-3984**

**Emergency Number**

**Radio Frequencies Marine: CH 16**

| <b>Resources</b>        | <b>Section</b> | <b>Salvage Companies/</b> |
|-------------------------|----------------|---------------------------|
| <b>Divers Area/Zone</b> | <b>1</b>       |                           |

**Organization Redwood City Fire Department**

**Address 755 Marshall Street**  
**City Redwood City State CA Zip 94063**

**Phone # 415-780-7400 Fax 415-780-7461**

**Emergency Number 415-368-1421**

**Radio Frequencies 153.890, 154.265, 154.295, 154.280**

| <b>Resources</b>              | <b>24 Hours: 415-368-1423</b> | <b>SectionSal-</b> |
|-------------------------------|-------------------------------|--------------------|
| <b>vage Companies/ Divers</b> | <b>Area/Zone</b>              | <b>1</b>           |

**Organization Sausalito Towing/Parker Diving**

**Address Box 1761**  
**City Sausalito State CA Zip 94966**

**Phone # 415-331-0329 Fax 415-488-4831**

**Emergency Number**

**Radio Frequencies All Channel Marine Radio**

| <b>Resources</b>        | <b>Section</b> | <b>Salvage Companies/</b> |
|-------------------------|----------------|---------------------------|
| <b>Divers Area/Zone</b> | <b>2</b>       |                           |

**Organization Shipway Marine**

**Address 4526 Sand Mound Boulevard**

**P.O. Box 872**

**City Oakley**

**State CA**

**Zip 94511**

**Phone # 510-684-3967**

**Fax 510-684-9270**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Salvage Companies/**

**Divers Area/Zone**

**2**

---

**Organization Small Boat Services**

**Address P.O. Box 910 (Office Onboard Boat)**

**City Pittsburg**

**State CA**

**Zip 94565**

**Phone # 510-439-8468**

**Fax**

**Emergency Number**

**Radio Frequencies Scan: 6, 16, 13, 21, 22, 81, 83**

**Resources**

**Section**

**Salvage Companies/**

**Divers Area/Zone**

**1**

---

**Organization Smit Salvage / North America**

**Address 5711 Port Industrial Blvd.**

**City Galveston**

**State TX**

**Zip 77551**

**Phone # 409-744-5238**

**Fax 409-744-0912**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fax Houst Office: 409-488-**

**8155Section**

**Salvage Companies/ Divers Area/**

**Zone 1**

**Organization** U.S.C.G. Marine Safety Center Salvage Team

**Address** 400 7th Street S.W.

**City** Washington

**State** DC

**Zip** 20590-0001

**Phone #** 202-336-6481

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Salvage Companies/ Divers**

**24 Hours: 202-267-2100**

**SectionSal-  
Area/Zone 3**

---

**Organization** U.S. Naval Comms. Station / Emergency Ship Salvage

**Address** Rough & Ready Island

**City** Stockton

**State** CA

**Zip**

**Phone #** 209-944-0284

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Divers Area/Zone**

**Section**

**1**

**Salvage Companies/**

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**Organization** U.S. Navy Supsalv

**Address**

**City** CNO Washingotn

**State** DC

**Zip**

**Phone #** 703-602-7527

**Fax** 703-607-2758

**Emergency Number**

**Radio Frequencies**

**Resources**

**Divers Area/Zone**

**Section**

**1**

**Salvage Companies/**

|                          |                                 |              |                     |            |              |
|--------------------------|---------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>Pier 26, The Embarcadero</b> |              |                     |            |              |
| <b>City</b>              | <b>San Francisco</b>            | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94105</b> |
| <b>Phone #</b>           | <b>415-974-5464</b>             | <b>Fax</b>   | <b>415-974-1749</b> |            |              |
| <b>Emergency Number</b>  |                                 |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>Channel 21</b>               |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** American Navigation Co.

|                          |                         |              |                     |            |              |
|--------------------------|-------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1312 Canal Blvd.</b> |              |                     |            |              |
| <b>City</b>              | <b>Richmond</b>         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94804</b> |
| <b>Phone #</b>           | <b>510-234-8847</b>     | <b>Fax</b>   | <b>510-234-0781</b> |            |              |
| <b>Emergency Number</b>  |                         |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>Ch 18</b>            |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>3 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

| <b>Organization</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Associated Divers and Towing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1. <b>United States Coast Guard</b></p> <ul style="list-style-type: none"> <li>- Atlantic Area</li> <li>- Gulf of Mexico Area</li> <li>- Pacific Area</li> <li>- Alaska Area</li> <li>- Great Lakes Area</li> <li>- Lake Erie District</li> <li>- Lake Michigan District</li> <li>- Lake Huron District</li> <li>- Lake Superior District</li> <li>- Lake Ontario District</li> <li>- Lake Erie District</li> <li>- Lake Michigan District</li> <li>- Lake Huron District</li> <li>- Lake Superior District</li> <li>- Lake Ontario District</li> </ul> | <p>1. <b>United States Coast Guard</b></p> <ul style="list-style-type: none"> <li>- Atlantic Area</li> <li>- Gulf of Mexico Area</li> <li>- Pacific Area</li> <li>- Alaska Area</li> <li>- Great Lakes Area</li> <li>- Lake Erie District</li> <li>- Lake Michigan District</li> <li>- Lake Huron District</li> <li>- Lake Superior District</li> <li>- Lake Ontario District</li> <li>- Lake Erie District</li> <li>- Lake Michigan District</li> <li>- Lake Huron District</li> <li>- Lake Superior District</li> <li>- Lake Ontario District</li> </ul> |

|                          |                     |              |              |
|--------------------------|---------------------|--------------|--------------|
| <b>Address</b>           |                     |              |              |
| <b>City</b>              | <b>Sacramento</b>   | <b>State</b> | <b>CA</b>    |
|                          |                     | <b>Zip</b>   | <b>95832</b> |
| <b>Phone #</b>           | <b>916-929-3224</b> | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                     |              |              |
| <b>Radio Frequencies</b> |                     |              |              |

| Resources<br>Area/Zone | Section<br>1 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Bay & Delta Tugboat Company

**Address** Pier 15  
**City** San Francisco **State** CA **Zip** 94111

**Phone #** 415-781-3577 **Fax** 415-781-0647

**Emergency Number**

**Radio Frequencies** CH 13, 18A

| <b>Resources</b> | <b>Section</b> | <b>Towing Companies</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>2</b>       |                         |

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**Organization** Brix Maritime (Formerly Tweed Towing)

**Address** P.O. Box 83018, 9030 N.W. Saint Helen Road  
**City** Portland **State** OR **Zip** 97238

**Phone #** 800-832-4143 **Fax** 503-289-7385

**Emergency Number**

**Radio Frequencies** CH 10

| <b>Resources</b> | <b>Section</b> | <b>Towing Companies</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>2</b>       |                         |

---

**Organization** Chevron USA - Richmond Long Wharf

**Address** 846 Chevron Way - P.O. Box 1272 94802  
**City** Richmond **State** CA **Zip** 94801

**Phone #** 510-242-2537 **Fax** 510-242-2779

**Emergency Number**

**Radio Frequencies** CH 10, 456.550

| <b>Resources</b>               | <b>Section</b> | <b>Towing Companies</b> | <b>Area/Zone</b> |
|--------------------------------|----------------|-------------------------|------------------|
| <b>Cellphone: 510-409-6343</b> |                |                         |                  |
| <b>1</b>                       |                |                         |                  |

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|                          |                         |              |                     |            |              |
|--------------------------|-------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>2900 Main Street</b> |              |                     |            |              |
| <b>City</b>              | <b>Alameda</b>          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94501</b> |
| <b>Phone #</b>           | <b>415-546-2646</b>     | <b>Fax</b>   | <b>415-546-2671</b> |            |              |
| <b>Emergency Number</b>  |                         |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>CH 10</b>            |              |                     |            |              |

|                         |                               |
|-------------------------|-------------------------------|
| <b>Resources</b>        | <b>24 Hours: 415-546-2600</b> |
| <b>Towing Companies</b> | <b>Section 1</b>              |

**Organization**      **Crowley Towing and Transportation**

|                          |                              |              |           |            |              |
|--------------------------|------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>101 California Street</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>         | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94111</b> |
| <b>Phone #</b>           | <b>415-546-2500</b>          | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                              |              |           |            |              |
| <b>Radio Frequencies</b> |                              |              |           |            |              |

| Resources<br>Area/Zone | Section<br>1 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

## Organization Dutra Construction

|                          |                               |              |                     |            |              |
|--------------------------|-------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>100 Pt. San Pedro Road</b> |              |                     |            |              |
| <b>City</b>              | <b>San Rafael</b>             | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94915</b> |
| <b>Phone #</b>           | <b>415-258-6876</b>           | <b>Fax</b>   | <b>415-258-9714</b> |            |              |
| <b>Emergency Number</b>  |                               |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>CH 14</b>                  |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**    Exxon Shipping Co. Ocean Fleet Office

**Address**    150 Industrial Way

**City**        Benicia

**State**    CA

**Zip**        94510-1016

**Phone #**    707-747-3200

**Fax**        707-747-3283

**Emergency Number**

**Radio Frequencies**        All VHF-FM Channels, CH 9

**Resources**

**Section**

**Towing Companies**

**Area/Zone**

**1**

---

**Organization**    Harbor Launch Co. (A Crowley Co.)

**Address**    Pier 9

**City**        San Francisco

**State**    CA

**Zip**        94111

**Phone #**    415-546-2646

**Fax**        415-546-2600

**Emergency Number**

**Radio Frequencies**        CH 10, 13, 16

**Resources**

**Section**

**Towing Companies**

**Area/Zone**

**1**

---

**Organization**    Healy Tibbitts Construction

**Address**    411 Brannen

**City**        San Francisco

**State**    CA

**Zip**        94107

**Phone #**    415-781-7268

**Fax**        415-546-1199

**Emergency Number**

**Radio Frequencies**        CH 13, 16

**Resources**

**Section**

**Towing Companies**

**Area/Zone**

**2**

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|                          |                                           |              |                     |            |              |
|--------------------------|-------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>Port of Richmond, 1316 Canal Blvd.</b> |              |                     |            |              |
| <b>City</b>              | <b>Richmond</b>                           | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94804</b> |
| <b>Phone #</b>           | <b>510-236-5880</b>                       | <b>Fax</b>   | <b>510-235-6786</b> |            |              |
| <b>Emergency Number</b>  |                                           |              |                     |            |              |
| <b>Radio Frequencies</b> |                                           | <b>CH 13</b> |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization** Oscar Niemeth Towing Inc.

|                                     |                       |                  |                     |            |              |
|-------------------------------------|-----------------------|------------------|---------------------|------------|--------------|
| <b>Address</b>                      | <b>P.O. Box 24848</b> |                  |                     |            |              |
| <b>City</b>                         | <b>Oakland</b>        | <b>State</b>     | <b>CA</b>           | <b>Zip</b> | <b>94623</b> |
| <b>Phone #</b>                      | <b>510-465-9681</b>   | <b>Fax</b>       | <b>510-893-2062</b> |            |              |
| <b>Emergency Number</b>             |                       |                  |                     |            |              |
| <b>Radio Frequencies</b>            |                       | <b>CH 13, 18</b> |                     |            |              |
| <b>American Eagle: 510-265-1993</b> |                       |                  |                     |            |              |

|                                   |                         |                               |  |
|-----------------------------------|-------------------------|-------------------------------|--|
| <b>Resources</b>                  |                         | <b>24 Hours: 510-893-0231</b> |  |
| <b>Silver Eagle: 510-265-3487</b> |                         |                               |  |
| <b>Sea Eagle: 510-265-3052</b>    |                         |                               |  |
| <b>Section 1</b>                  | <b>Towing Companies</b> | <b>Area/Zone</b>              |  |

**Organization**      **Port of Redwood City**

|                          |                          |              |                     |            |                   |
|--------------------------|--------------------------|--------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>675 Seaport Blvd.</b> |              |                     |            |                   |
| <b>City</b>              | <b>Redwood City</b>      | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94063-2794</b> |
| <b>Phone #</b>           | <b>415-306-4150</b>      | <b>Fax</b>   | <b>415-369-7636</b> |            |                   |
| <b>Emergency Number</b>  |                          |              |                     |            |                   |
| <b>Radio Frequencies</b> | <b>CH 68</b>             |              |                     |            |                   |

| Resources<br>Area/Zone | Section<br>3 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Port of Stockton**

**Address** 2201 West Washington  
**City** Stockton **State** CA **Zip** 95201-2089

**Phone #** 209-946-0246 **Fax** 209-465-7244

**Emergency Number**

**Radio Frequencies** 158.745, 154.830, 460.625, 460.575, 460.25, 460.075, 460.40, 460.20

**Marine** 16, 18

| <b>Resources</b> | <b>Section</b> | <b>Towing Companies</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>3</b>       |                         |

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**Organization** Sacramento Tugboat Company

**Address** P.O. Box 444  
**City** West Sacramento **State** CA **Zip** 95691

**Phone #** 916-372-0578 **Fax**

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Towing Companies</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>2</b>       |                         |

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**Organization** Sander Tow Boat

**Address** P.O. Box 1026  
**City** Benicia **State** CA **Zip** 94510

**Phone #** 707-745-4340 **Fax** 707-745-8076

**Emergency Number**

**Radio Frequencies** Marine CH 18

| <b>Resources</b> | <b>Section</b> | <b>Towing Companies</b> |
|------------------|----------------|-------------------------|
| <b>Area/Zone</b> | <b>1</b>       |                         |

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|                          |                                 |              |                     |            |              |
|--------------------------|---------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>Box 1761</b>                 |              |                     |            |              |
| <b>City</b>              | <b>Sausalito</b>                | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94966</b> |
| <b>Phone #</b>           | <b>415-331-0329</b>             | <b>Fax</b>   | <b>415-488-4831</b> |            |              |
| <b>Emergency Number</b>  |                                 |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>All Channel Marine Radio</b> |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>1 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|

**Organization**      **Seaway Transportation Co.**

|                          |                         |              |                     |            |              |
|--------------------------|-------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>2900 Main Street</b> |              |                     |            |              |
| <b>City</b>              | <b>Alameda</b>          | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94501</b> |
| <b>Phone #</b>           | <b>510-521-3283</b>     | <b>Fax</b>   | <b>510-865-8653</b> |            |              |
| <b>Emergency Number</b>  |                         |              |                     |            |              |
| <b>Radio Frequencies</b> | <b>CH 18A</b>           |              |                     |            |              |

| Resources                         |                  | Cellular: |
|-----------------------------------|------------------|-----------|
| Tug "Southern Cross" 510-519-3437 |                  |           |
| "Polaris" 510-279-1807            | Section          |           |
| 2                                 |                  |           |
|                                   | Towing Companies | Area/Zone |

**Organization**      **Shipway Marine**

|                          |                                               |              |                     |            |              |
|--------------------------|-----------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 872, 4526 San Mound Boulevard</b> |              |                     |            |              |
| <b>City</b>              | <b>Oakley</b>                                 | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94511</b> |
| <b>Phone #</b>           | <b>510-684-3967</b>                           | <b>Fax</b>   | <b>510-684-9270</b> |            |              |
| <b>Emergency Number</b>  |                                               |              |                     |            |              |
| <b>Radio Frequencies</b> |                                               |              |                     |            |              |

| Resources<br>Area/Zone | Section<br>2 | Towing Companies |
|------------------------|--------------|------------------|
|------------------------|--------------|------------------|



**Organization** U.S. Navy Port Services

**Address** Code 20 Navship Mare Island

**City** Vallejo **State** CA **Zip** 94952-5000

**Phone #** 707-646-2425

**Fax** 707-646-3213

**Emergency Number**

**Radio Frequencies** CH 14

**Resources**

**24 Hours:** 707-646-3428

**Towing Companies**

**Area/Zone** 2

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**Organization** U.S. Navy Port Services

**Address** Operations Department, Code 20902 NAVWEPSTA

**City** Concord **State** CA **Zip** 94520

**Phone #** 510-671-5331

**Fax**

**Emergency Number**

**Radio Frequencies** 156.000

**CH 14**

**Resources**

**24 Hours:** 510-246-5170

**Towing Companies**

**Area/Zone** 1

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**Organization** U.S. Navy Port Services Bldg 3

**Address** Port Operations, Treasure Island

**City** San Francisco **State** CA **Zip** 94130

**Phone #** 415-395-5555

**Fax**

**Emergency Number**

**Radio Frequencies** 150.65

**CH 13, 14**

**Resources**

**24 Hours:** 415-395-5554

**Towing Companies**

**Area/Zone** 1

---

**Organization**    **Wesstar Towboat Service**

**Address**    **Pier 46B**

**City**        **San Francisco**

**State**    **CA**

**Zip**        **94107**

**Phone #**    **415-495-3191**

**Fax**        **415-495-0683**

**Emergency Number**

**Radio Frequencies**        **CH 9**

**Resources**

**Section**

**State Agencies Area/**

**Zone**        **1**

---

**Organization**    **Bay Area Air Quality Management District**

**Address**    **939 Ellis Street**

**City**        **San Francisco**

**State**    **CA**

**Zip**        **94109**

**Phone #**    **415-771-6000**

**Fax**        **415-928-0338**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 800-334-6367**

**State Agencies**

**Section Area/Zone**    **2**

---

**Organization**    **California Dept. of Fish and Game - Hazmant Coordinator**

**Address**    **P.O. Box 47**

**City**        **Yountville**

**State**    **CA**

**Zip**        **94599**

**Phone #**    **707-744-5500**

**Fax**        **707-944-5563**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 916-262-1621**

**State Agencies**

**Section Area/Zone**    **1**

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**Organization** Ca. Dept. o f Fish and Game - Marine Resource Division

**Address** 411 Burgess Drive

**City** Menlo Park

**State** CA

**Zip** 94025

**Phone #** 916-262-1621

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**State Agencies Area/**

**Zone** 3

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**Organization** Ca. Dept. Fish and Game, O.S.P.R.

**Address** P.O. Box 944209

**City** Sacramento

**State** CA

**Zip** 94244-2090

**Phone #** 916-445-0045

**Fax** 916-323-0774

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 916-262-1621Section**

**State Agencies**

**Area/Zone 2**

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**Organization** Ca. Dept. Fish and Game, O.S.P.R.

**Address** 1700 "K" Street

**City** Sacramento

**State** CA

**Zip** 94244-2090

**Phone #** 916-445-0045

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**State Agencies Area/**

**Zone** 2

---

**Organization** Ca. Dept. Fish and Game, O.S.P.R.

**Address** Mins P.O. Box 2113, Bldg. 755, Stop  
**City** Vallejo **State** CA **Zip** 94592-5100

**Phone #** 707-552-0983 **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources** **24 Hours: 916-262-1621**  
**State Agencies** **Area/Zone** 3

---

**Organization** Ca. Dept. Fish and Game Region 2

**Address** 1701 Nimbus Road  
**City** Rancho Cordova **State** CA **Zip** 95670

**Phone #** 916-355-0978 **Fax** 916-355-7102  
**Emergency Number**  
**Radio Frequencies**

**Resources** **24 Hours: 916-262-1621**  
**Dispatch: 916-355-7040** **Section** **State Agencies** **Area/Zone**  
3

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**Organization** Ca. Dept. Fish and Game, Oil & Hazmat Section

**Address** P.O. Box 944209  
**City** Sacramento **State** CA **Zip** 94244-2090

**Phone #** 916-324-7245 **Fax** 916-324-8829  
**Emergency Number** 800-852-7550  
**Radio Frequencies**

**Resources** **24 Hours: 916-445-0045 (Dispatch**  
**Ctr) Section** **State Agencies** **Area/Zone**  
1

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**Organization** Ca. Dept. of Parks & Recreation, Bay Area District

**Address** 95 Kelly Ave.  
**City** Half Moon Bay **State** CA **Zip** 94019

**Phone #** 415-726-8800 **Fax** 415-726-0668  
**Emergency Number**  
**Radio Frequencies**

**Resources** **24 Hours: 408-649-2810**  
**State Agencies** **Area/Zone 2**

---

**Organization** Ca. OES Fire & Rescue Division, Coastal Region

**Address** 360 Civic Drive., Suite 1  
**City** Pleasant Hill **State** CA **Zip** 94523

**Phone #** 510-646-5908 **Fax** 510-646-5918  
**Emergency Number**  
**Radio Frequencies**

**Resources** **24 Hours: 800-852-7550**  
**916-262-1621** **Section** **State Agencies** **Area/Zone**  
**2**

---

**Organization** Ca. OES Fire & Rescue Division

**Address** 2800 Meadowroad  
**City** Sacramento **State** CA **Zip** 95832

**Phone #** 916-262-1685 **Fax** 916-262-1697  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Hazmat: 916-262-1750**  
**24 Hours: 916-262-1621**  
**800-852-7550** **Section** **State Agencies** **Area/Zone**  
**3**

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**Organization** Ca. OES Hazmat Division

**Address** 2800 Meadowview Road  
**City** Sacramento

**State** CA **Zip** 95832

**Phone #** 916-262-1685  
**Emergency Number**  
**Radio Frequencies**

**Fax**

**Resources**

**24 Hours: 800-852-7550**

916-262-1621

916-262-2880

**State Agencies**

**Area/Zone**

**1**

---

**Organization** Ca. Regional Water Quality Control Board #1

**Address** 5550 Skyline Blvd., Suite A  
**City** Santa Rosa

**State** CA **Zip** 95403

**Phone #** 707-576-2220  
**Emergency Number**  
**Radio Frequencies**

**Fax**

**Resources**

**Section**

**State Agencies Area/**

**Zone** 1

---

**Organization** Ca. Regional Water Quality Control Board #2

**Address** 2101 Webster, Suite 500

**City** Oakland

**State** CA **Zip** 94607

**Phone #** 510-286-1255  
**Emergency Number**  
**Radio Frequencies**

**Fax** 510-286-1380

**Resources**

**tion** State Agencies

**CA State OES: 800-852-7550Sec-  
Area/Zone** 3

---

**Organization** Ca. State Fire Marshals Office

**Address** 7171 Bowling Green Dr., Suite 600  
**City** Sacramento **State** CA **Zip** 95823-2034

**Phone #** 916-262-2010 **Fax** 916-262-1998

**Emergency Number**

**Radio Frequencies**

**Resources** **24 Hours: 800-852-7550**

**Pipelines: 916-262-1957**

**Refineries: 916-262-1957** **Section** **State Agencies** **Area/Zone**  
**1**

---

**Organization** Cal OSHA

**Address** 1309 Market Street  
**City** San Francisco **State** CA **Zip** 94102

**Phone #** 415-557-8640 **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources** **Section** **State Agencies** **Area/**  
**Zone** **2**

---

**Organization** California Coastal Commission

**Address** 45 Fremont Street, Suite 2000  
**City** San Francisco **State** CA **Zip** 94105-2219

**Phone #** 415-904-5250 **Fax** 415-904-5400

**Emergency Number**

**Radio Frequencies**

**Resources** **Pager: 415-201-5792** **Section** **State**  
**Agencies** **Area/Zone** **3**

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## Address

**City**      **Chico**                                  **State**    **CA**                                  **Zip**

**Phone # 916-873-0330**

**Fax**

## Emergency Number

## Radio Frequencies

## Resources

## Section

State Agencies Area/

**Zone 3**

**Organization**      **California Conservation Corps, HQ**

**Address** 1530 Capital Ave.

|      |            |       |    |     |       |
|------|------------|-------|----|-----|-------|
| City | Sacramento | State | CA | Zip | 95814 |
|------|------------|-------|----|-----|-------|

**Phone # 916-262-1842**

**Fax**

## Emergency Number

## Radio Frequencies

## Resources

## Section

State Agencies Area/

### Zone 3

**Organization** California Conservation Corps, Magalia

**Address** 6660 Steiffer Road

**City**      **Magalia**                                  **State**    **CA**                                  **Zip**    **95954**

**Phone # 916-873-0330**

**Fax 916-873-1473**

## Emergency Number

## Radio Frequencies

## Resources

## Section

State Agencies Area/

### Zone 3

## Address

|             |                 |              |           |            |
|-------------|-----------------|--------------|-----------|------------|
| <b>City</b> | <b>Oroville</b> | <b>State</b> | <b>CA</b> | <b>Zip</b> |
|-------------|-----------------|--------------|-----------|------------|

**Phone # 916-873-2214**

**Fax**

## Emergency Number

## Radio Frequencies

## Resources

## Section

**State Agencies Area/**

## Zone 2

## Address

|      |           |       |    |     |
|------|-----------|-------|----|-----|
| City | Pittsburg | State | CA | Zip |
|------|-----------|-------|----|-----|

**Phone # 510-439-4021****Fax**

## Emergency Number

## Radio Frequencies

## Resources

## Section

State Agencies Area/

## Zone 1

**Address** P.O. Box 4128

**City**      Santa Clara                                  **State**   CA                                  **Zip**    95056-4128

**Phone # 408-277-1150**

**Fax 408-277-1974**

## Emergency Number

## Radio Frequencies

## Resources

## Section

State Agencies Area/

### Zone 3







**Address** 1120 N. Street  
**City** Sacramento

**State** CA **Zip** 95814

**Phone #** 916-653-2015  
**Emergency Number**  
**Radio Frequencies**

**Fax** 916-653-3291

**Resources**  
**Caltrans Winter: 916-653-3442**  
**Section**  
**3**

**24 Hours: CHP Zenith 12000**  
**State Agencies** **Area/Zone**

---

**Organization** Committee on Maritime Industry

**Address** State Capitol, Room 5035  
**City** Sacramento

**State** CA **Zip** 95814

**Phone #** 916-322-5120  
**Emergency Number**  
**Radio Frequencies**

**Fax** 916-327-7229

**Resources**  
**Message: 916-445-1412**  
**Section**  
**1**

**After Hours: 916-921-6352**  
**State Agencies** **Area/Zone**

---

**Organization** Joint California CC/BCDC Oil Spill Program

**Address** 45 Fremont St., Suite 2000  
**City** San Francisco

**State** CA **Zip** 94105-2219

**Phone #** 415-904-5240  
**Emergency Number**  
**Radio Frequencies**

**Fax** 415-904-5400

**Resources** **Section** **Local Agencies**  
**Zone** 1 **Area/**

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**Organization**    **Association of Bay Area Governments**

**Address**    **P.O. Box 2050**

**City**        **Oakland**

**State**   **CA**

**Zip**        **94604-2050**

**Phone #**   **510-464-7900**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Local AgenciesArea/**

**Zone**        **1**

---

**Organization**    **Bay Area Quality Management District**

**Address**    **939 Ellis Street**

**City**        **San Francisco**

**State**   **CA**

**Zip**        **94109**

**Phone #**    **415-771-6000**

**Fax**        **415-928-0338**

**Emergency Number**

**Radio Frequencies**

**Resources**

**42 Hours: 800-334-6367SectionLo-**

**cal Agencies**

**Area/Zone**    **1**

---

**Organization**    **Berkeley Health and Human Services Dept.**

**Address**    **2180 Milvia Street**

**City**        **Berkeley**

**State**   **CA**

**Zip**        **94703**

**Phone #**    **510-644-6459**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Local AgenciesArea/**

**Zone**        **2**

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|                          |                           |              |                     |            |                   |
|--------------------------|---------------------------|--------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>4333 Pacheco Blvd.</b> | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94553-2295</b> |
| <b>City</b>              | <b>Martinez</b>           |              |                     |            |                   |
| <b>Phone #</b>           | <b>510-646-2286</b>       | <b>Fax</b>   | <b>510-646-2073</b> |            |                   |
| <b>Emergency Number</b>  |                           |              |                     |            |                   |
| <b>Radio Frequencies</b> |                           |              |                     |            |                   |

| Resources | Section | Local AgenciesArea/ |
|-----------|---------|---------------------|
| Zone 2    |         |                     |

**Organization**      **Contra Costa County OES**

|                          |                        |              |                     |            |              |
|--------------------------|------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>50 Glacier Ave.</b> |              |                     |            |              |
| <b>City</b>              | <b>Martinez</b>        | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94553</b> |
| <b>Phone #</b>           | <b>510-499-6538</b>    | <b>Fax</b>   | <b>510-646-1120</b> |            |              |
| <b>Emergency Number</b>  |                        |              |                     |            |              |
| <b>Radio Frequencies</b> |                        |              |                     |            |              |

| Resources | 510-228-5000Section | Alternate #: 510-646-6538 | Local Agencies | Area/Zone |
|-----------|---------------------|---------------------------|----------------|-----------|
| 2         |                     |                           |                |           |

**Organization**      **County of Solano Administrator**

|                          |                                           |              |            |            |              |
|--------------------------|-------------------------------------------|--------------|------------|------------|--------------|
| <b>Address</b>           | <b>Courthouse Annex, 600 Texas Street</b> |              |            |            |              |
| <b>City</b>              | <b>Fairfield</b>                          | <b>State</b> | <b>CA</b>  | <b>Zip</b> | <b>94553</b> |
| <b>Phone #</b>           | <b>707-421-6330</b>                       |              | <b>Fax</b> |            |              |
| <b>Emergency Number</b>  |                                           |              |            |            |              |
| <b>Radio Frequencies</b> |                                           |              |            |            |              |

| Resources | Section | Local AgenciesArea/ |
|-----------|---------|---------------------|
| Zone 1    |         |                     |

**Organization** East Bay Regional Park District Dept. of Public Safety

**Address** 2950 Peralta Oaks Ct., P.O. Box 5381

**City** Oakland **State** CA **Zip** 94619

**Phone #** 510-635-0135 **Fax** 510-569-4319

**Emergency Number**

**Radio Frequencies**

**Resources** **24 Hours: 510-881-1121**  
**cal Agencies** **SectionLo-**  
**Area/Zone** **1**

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**Organization** Marin County Assistant Administrator

**Address** Civic Center, Room 331

**City** San Rafael **State** CA **Zip** 94903

**Phone #** 415-499-6538 **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources** **Section** **Local AgenciesArea/**  
**Zone** **1**

---

**Organization** Marin County Sheriff's Office, OES

**Address** 3501 Civic Center, Room 276

**City** San Rafael **State** CA **Zip** 94903

**Phone #** 415-499-6584 **Fax** 415-499-7450

**Emergency Number**

**Radio Frequencies**

**Resources** **Section** **Local AgenciesArea/**  
**Zone** **2**

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**Organization**    **San Francisco City/County OES**

**Address**    **1003A Turk Street**

**City**        **San Francisco**

**State**   **CA**

**Zip**       **94102**

**Phone #**   **415-558-2700**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Local AgenciesArea/**

**Zone**      **1**

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**Organization**    **San Francisco Estuary Project, C/O RWQCB**

**Address**    **2101 Webster Street, Suite 500**

**City**        **Oakland**

**State**   **CA**

**Zip**       **94612**

**Phone #**   **510-286-0734**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Local AgenciesArea/**

**Zone**      **1**

---

**Organization**    **San Joaquin County OES**

**Address**    **222 East Weber Ave., Room #610**

**City**        **Stockton**

**State**   **CA**

**Zip**       **95022**

**Phone #**   **209-468-0962**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Local AgenciesArea/**

**Zone**      **1**

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**Organization**     **San Mateo Operational Area, OES**

**Address**     **401 Marshall Street, Dept 5410**

**City**     **Redwood City**     **State**     **CA**     **Zip**     **94063-0978**

**Phone #**     **415-363-4790**     **Fax**     **415-363-1868**

**Emergency Number**

**Radio Frequencies**

|                      |                |                            |
|----------------------|----------------|----------------------------|
| <b>Resources</b>     | <b>Section</b> | <b>Local AgenciesArea/</b> |
| <b>Zone</b> <b>1</b> |                |                            |

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**Organization**     **Santa Clara County, Office of Co. Executive**

**Address**     **70 West Hedding East Wing 11th**

**City**     **Santa Clara**     **State**     **CA**     **Zip**     **95110**

**Phone #**     **408-299-3751**     **Fax**

**Emergency Number**

**Radio Frequencies**

|                      |                |                            |
|----------------------|----------------|----------------------------|
| <b>Resources</b>     | <b>Section</b> | <b>Local AgenciesArea/</b> |
| <b>Zone</b> <b>2</b> |                |                            |

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**Organization**     **Solano County OES, Courthouse Annex**

**Address**     **600 Texas Street**

**City**     **Fairfield**     **State**     **CA**     **Zip**     **94533**

**Phone #**     **707-429-6506**     **Fax**

**Emergency Number**

**Radio Frequencies**

|                       |                                        |
|-----------------------|----------------------------------------|
| <b>Resources</b>      | <b>Alternate : 707-421-7900Section</b> |
| <b>Local Agencies</b> | <b>Area/Zone     1</b>                 |

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**Organization** Sonoma County OES

**Address** 600 Administration Drive #103C

**City** Santa Rosa **State** CA **Zip** 95403

**Phone #** 707-527-3161 **Fax**

**Emergency Number**

**Radio Frequencies**

|                  |                |                     |              |
|------------------|----------------|---------------------|--------------|
| <b>Resources</b> | <b>Section</b> | <b>Laboratories</b> | <b>Area/</b> |
| <b>Zone</b> 3    |                |                     |              |

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**Organization** Aerojet Propulsion Div Enviro Data Lab - #1208

**Address** Hwy 50 at Hazel Ave., Blvd. 02030 DP 5379

**City** Nimbus **State** CA **Zip** 95670

**Phone #** 916-355-2148 **Fax**

**Emergency Number**

**Radio Frequencies**

|                     |                                                                                                                              |                |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>Resources</b>    | <b>Fields of Testing: Physical prop-<br/>erty tests, inorganic chem., extraction tests, organics by GC/MS, organic chem.</b> | <b>Section</b> |
| <b>Laboratories</b> | <b>Area/Zone</b> 1                                                                                                           |                |

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**Organization** Air Toxics Limited

**Address** 180 Blue Ravine Road

**City** Folsom **State** CA **Zip** 95630-4719

**Phone #** 916-638-9872 **Fax**

**Emergency Number**

**Radio Frequencies**

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| <b>Resources</b>                          | <b>Fields of Testing: Organics by GC/</b> |
| <b>MS organic chemistry; air analysis</b> | <b>Laboratories Area/Zone</b> 1           |

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**Phone # 707-778-8607** **Fax**  
**Emergency Number**  
**Radio Frequencies**

| Resources         | Fields of Testing: Organic |   |
|-------------------|----------------------------|---|
| chemistry.Section | Laboratories Area/Zone     | 2 |

**Organization** American Environmental Network, Inc. #E 772

|                |                          |              |           |            |              |
|----------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b> | <b>3440 Vincent Road</b> |              |           |            |              |
| <b>City</b>    | <b>Pleasant Hill</b>     | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94523</b> |

**Phone # 510-930-9090** **Fax**  
**Emergency Number**  
**Radio Frequencies**

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b>    | <b>Fields of Testing:</b> Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. |
| <b>Laboratories</b> | <b>Area/Zone</b> 3                                                                                                      |

**Organization**     **Analab Analytical Laboratory - #1468**

|                |               |              |    |            |       |
|----------------|---------------|--------------|----|------------|-------|
| <b>Address</b> | 1910 S Street |              |    |            |       |
| <b>City</b>    | Sacramento    | <b>State</b> | CA | <b>Zip</b> | 95814 |

**Phone #   916-447-2946**

**Fax       916-447-8321**

**Emergency Number**

**Radio Frequencies**

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b>    | <b>Fields of Testing:</b> Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. |
| <b>Laboratories</b> | <b>Area/Zone</b> 3                                                                                                      |

|                          |                                     |              |           |            |              |
|--------------------------|-------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>4011 Power Inn Road, Suite G</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>                   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95826</b> |
| <b>Phone #</b>           | <b>916-451-5034</b>                 | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                     |              |           |            |              |
| <b>Radio Frequencies</b> |                                     |              |           |            |              |

| Resources        | Fields of Testing: Organic |   |
|------------------|----------------------------|---|
| chemistrySection | Laboratories Area/Zone     | 1 |

**Organization**      **Anamatrix Inc. - #1234**

|                          |                                      |              |           |            |              |
|--------------------------|--------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1961 Concourse Drive, Suite E</b> |              |           |            |              |
| <b>City</b>              | <b>San Jose</b>                      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95131</b> |
| <b>Phone #</b>           | <b>408-432-8192</b>                  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                      |              |           |            |              |
| <b>Radio Frequencies</b> |                                      |              |           |            |              |

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b>    | <b>Fields of Testing:</b> Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. |
| <b>Laboratories</b> | <b>Area/Zone 1</b>                                                                                                      |

**Organization**      **Anresco - #1523**

|                          |                            |              |           |            |              |
|--------------------------|----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1370 Van Dyke Drive</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>       | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94124</b> |
| <b>Phone #</b>           | <b>415-822-1100</b>        | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                            |              |           |            |              |
| <b>Radio Frequencies</b> |                            |              |           |            |              |

| Resources | Fields of Testing: Physical property tests, inorganic chemistry, extraction tests, organic chemistry | Section | Laboratories |
|-----------|------------------------------------------------------------------------------------------------------|---------|--------------|
| Area/Zone | 1                                                                                                    |         |              |



**Organization** BRELJE and RQCE Laboratories Inc. - #1243

**Address** 425 South E Street

**City** Santa Rosa

**State** CA

**Zip** 95404

**Phone #** 707-544-8807

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, aquatic toxicity bioassay  
**Section** Laboratories  
**Area/Zone** 1

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**Organization** Calcoast Analytical Laboratory - #1236

**Address** 4072 Watts Street

**City** Emeryville

**State** CA

**Zip** 94608

**Phone #** 510-652-2979

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.  
**Section** Laboratories  
**Area/Zone** 1

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**Organization** California Dept. of Health Services, Labs Division

**Address** 2151 Berkeley Way

**City** Berkeley

**State** CA

**Zip** 94704-1011

**Phone #** 510-540-2800

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Zone** 1

**Section**

**Laboratories** Area/

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**Organization** California Dept. of Toxic Subs Control

**Address** 2151 Berkeley Way

**City** Berkeley

**State** CA

**Zip** 94704-1011

**Phone #** 510-540-2048

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Laboratories** Area/

**Zone** 2

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**Organization** Caltest Analytical Lab Environmental Services - #360

**Address** 1885 North Kelly Road

**City** Napa

**State** CA

**Zip** 94558

**Phone #** 707-258-4000

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.

**Laboratories**

**Section** Area/Zone 2

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**Organization** Central Contra Costa Sanitary Dist, #1397 Plant

**Address** 5019 Imhoff Place

**City** Martinez

**State** CA

**Zip** 94553

**Phone #** 510-689-3890

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Inorganic chemistry, extraction tests, organics by GC/MS, org. chem., aquatic toxicity, bioassay

**Laboratories**

**Section** Area/Zone 1

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**Organization** CGS Analytical laboratory, #1189

**Address** 3479 Edison Way

**City** Fremont

**State** CA

**Zip** 94538

**Phone #** 510-659-1784

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**chemistrySection**

**Fields of Testing: Inorganic**

**Laboratories Area/Zone**

**3**

**Organization** Chemwest Analytical Laboratories Inc. - #1505

**Address** 600W North Market Boulevard

**City** Sacramento

**State** CA

**Zip** 95834

**Phone #** 916-923-0840

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**erty tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.Section**

**Laboratories**

**Fields of Testing: Physical prop-**

**Area/Zone 2**

**Organization** Chevron USA Inc. - Quality Control Division - #E702

**Address** 481 Chevron Way

**City** Richmond

**State** CA

**Zip** 94802

**Phone #** 510-242-2172

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**erty tests, inorganic chemistry, extraction tests, GC analysis, org. chem, bioassaySection**

**Laboratories**

**Fields of Testing: Physical prop-**

**Area/Zone 2**





**Organization** CKY Inc. Analytical Lab, #1587

**Address** 3942 Valley Avenue, Suite F

**City** Pleasanton **State** CA **Zip** 94566

**Phone #** 510-846-3188 **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources** **Fields of Testing:** Physical property tests, extraction tests, organics by GC/MS, organic chemistSection **Laboratories**  
**Area/Zone** 1

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**Organization** Clayton Environmental Consult Inc. #1196

**Address** 1252 Quarry Lane

**City** Pleasanton **State** CA **Zip** 94566

**Phone #** 510-426-2600 **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources** **Fields of Testing:** Inorganic chemistry, extraction tests, organics by GC/MS, org. chem., industrial hygiene analysisSection **Laboratories**  
**Area/Zone** 2

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**Organization** Coast to Coast Analytical Serv, #1204

**Address** 2059 Junciton Avenue

**City** San Jose **State** CA **Zip** 95131

**Phone #** 408-955-9077 **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources** **Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.Section **Laboratories**  
**Area/Zone** 2

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**Organization** Coast to Coast Analytical Srv/Mobile 1, #1322

**Address** 6006 Egret Court

**City** Benicia

**State** CA

**Zip** 94510

**Phone #** 707-747-2757

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.

**Laboratories**

**Section Area/Zone** 1

---

**Organization** Columbia Analysis Svcs. Inc. - #1426 S J Environ. Svcs.

**Address** 1921 Ringwood Avenue

**City** San Jose

**State** CA

**Zip** 95131

**Phone #** 408-437-2400

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.

**Laboratories**

**Section Area/Zone** 1

---

**Organization** Curtis & Tompkins Ltd. Analytical Labs #1459

**Address** 2323 5th Street

**City** Berkeley

**State** CA

**Zip** 94710

**Phone #** 510-486-0900

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.

**Laboratories**

**Section Area/Zone** 1

---

**Organization** D & M Laboratories, Mobiveh Lic #4B79390 - #1528

**Address** 3700 Lakeville Highway

**City** Petaluma

**State** CA

**Zip** 94954

**Phone #** 707-763-8245

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**chemistrySection**

**Fields of Testing: Organic**

**Laboratories Area/Zone**

**1**

**Organization** D & M Labs, Division of Dames and Moore - #1300

**Address** 3700 Lakeville Highway

**City** Petaluma

**State** CA

**Zip** 94954

**Phone #** 707-763-8245

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**erty tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.Section**

**Laboratories**

**Fields of Testing: Physical prop-**

**Area/Zone 1**

**Organization** Eb mud Laboratory Services Division, #E660

**Address** 2020 Wake Ave. (1/4 Mi E. Oakland Army Base)

**City** Oakland

**State** CA

**Zip** 94607

**Phone #** 510-287-1435

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**istry, extraction tests, organics by GC/MS, org. chem., toxicity testing, phys. testsSection**

**Laboratories**

**Fields of Testing: Inorganic chem-**

**Area/Zone 3**

**Organization**    **Enseco - California Analytical Lab #E 771**

**Address**    **2544 Industrial Boulevard**

**City**        **West Sacramento**                      **State**    **CA**                      **Zip**    **95691**

**Phone #**    **916-374-4300**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Physical prop-  
erty tests, inorganic chem., extraction tests, organics by GC/MS, org. chem.**  
**tories**        **Area/Zone**                                              **1**

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**Organization**    **Environmental Evaluation (No Lab)**

**Address**    **22 Battery Street, Suite 1100**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**    **94111**

**Phone #**    **415-956-5700**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: SectionLaborato-  
ries**        **Area/Zone**                                              **3**

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**Organization**    **Environmental Micro Analysis Inc. #1248**

**Address**    **40 North East Street, Suite B**

**City**        **Woodland**                      **State**    **CA**                      **Zip**    **95776**

**Phone #**    **916-666-6890**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Organic  
chemistrySection**                                              **Laboratories**    **Area/Zone**                                              **2**

---



**Organization** Eureka Laboratories Inc. - #1165

**Address** 6790 Florin Perkins Road

**City** Sacramento

**State** CA

**Zip** 95828

**Phone #** 916-381-7953

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. Section  
**Laboratories** Area/Zone 3

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**Organization** Eureka Labs Inc./Mobil Lab Srv. Div., #1304

**Address** 6790 Florin Perkins Road

**City** Sacramento

**State** CA

**Zip** 95828

**Phone #** 916-381-7953

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Organic chemistry Section  
**Laboratories** Area/Zone 3

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**Organization** FGL Environmental - Stockton, #1563

**Address** 2500 Stagecoach Road

**City** Stockton

**State** CA

**Zip** 95215

**Phone #** 209-942-0181

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Inorganic chemistry, extraction tests, organics by GC/MS, organic chemistry Section  
**Laboratories** Area/Zone 1

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**Organization** FMC Corp. - Corp. Tech Ctr., Material Eng Lab #E716

**Address** 1205 Coleman Avenue

**City** Santa Clara **State** CA **Zip** 95052

**Phone #** 408-289-2242

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

erty tests, inorganic chemistry, extraciton testsSection

**Fields of Testing: Physical prop-**

**Laboratories Area/Zone 1**

**Organization** Forensic Analytical Specialties, #1202

**Address** 3777 Depot Road, Suite 406-409

**City** Hayward **State** CA **Zip** 94545

**Phone #** 510-887-8828

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

istry, extraction tests, asbestosSection

**Fields of Testing: Inorganic chem-**

**Laboratories Area/Zone 2**

**Organization** Frank G. Monaghan, CIH, CSP

**Address** 260 American Canyon Road, Space 77

**City** American Canyon **State** CA **Zip** 94589

**Phone #** 707-554-8855

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

rine Chemist; Oxygen, flammable & toxic gasses and vaporsSection **Laboratories Area/Zone 2**



**Organization** GTEL Environment Lab/Mobile Lic. #1UR5172, #E 628

**Address** 4080 Pi ke Lane

**City** Concord **State** CA **Zip** 94520

**Phone #** 510-685-7852 **Fax**

**Emergency Number**

**Radio Frequencies**

|                  |                                   |
|------------------|-----------------------------------|
| <b>Resources</b> | <b>Fields of Testing: Organic</b> |
| chemistrySection | Laboratories Area/Zone 2          |

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**Organization** GTEL Environmental Lab Inc. - N.W. Region, #E675

**Address** 4080 Pi ke Lane

**City** Concord **State** CA **Zip** 94520

**Phone #** 510-685-7852 **Fax**

**Emergency Number**

**Radio Frequencies**

|                                                                                         |                                          |
|-----------------------------------------------------------------------------------------|------------------------------------------|
| <b>Resources</b>                                                                        | <b>Fields of Testing: Physical prop-</b> |
| erty tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.Section |                                          |
| Laboratories                                                                            | Area/Zone 1                              |

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**Organization** H&H Enviro Serv. Lab, H&H Ship Serv Co. Inc. #1537

**Address** 220 China Basin Street

**City** San Francisco **State** CA **Zip** 94107

**Phone #** 415-543-4835 **Fax** 415-543-8265

**Emergency Number**

**Radio Frequencies**

|                                                                                          |                                          |
|------------------------------------------------------------------------------------------|------------------------------------------|
| <b>Resources</b>                                                                         | <b>Fields of Testing: Physical prop-</b> |
| erty tests, inorganic chemistry, organics by GC/MS, organic chemistrySectionLaboratories |                                          |
| Area/Zone                                                                                | 1                                        |

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**Organization** I.T. Corp/Mobile Veh. Lic. #3V42113, #1564

**Address** 4585 Pacheco Blvd.

**City** Martinez **State** CA **Zip** 94553

**Phone #** 510-372-9100 **Fax**

**Emergency Number**

**Radio Frequencies**

|                  |                                                                  |
|------------------|------------------------------------------------------------------|
| <b>Resources</b> | <b>Fields of Testing: Inorganic chemistry, organic chemistry</b> |
| <b>Section</b>   | <b>Laboratories Area/Zone 1</b>                                  |

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**Organization** IBM San Jose Enviro & Industrial Lab - #1290 - Storage

**Address** 5600 Cottle Road, Bldg. 110

**City** San Jose **State** CA **Zip** 95193

**Phone #** 408-256-2555 **Fax**

**Emergency Number**

**Radio Frequencies**

|                                             |                                                                                    |
|---------------------------------------------|------------------------------------------------------------------------------------|
| <b>Resources</b>                            | <b>Fields of Testing: Physical property tests, inorganic chemistry, org. chem.</b> |
| <b>Alternate #: 408-256-2047 (Lab Mgr.)</b> | <b>Section Laboratories Area/Zone 2</b>                                            |

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**Organization** K Prime Analytical Laboratory, #1532

**Address** 4197 Lakeside Drive, Suite 170

**City** Richmond **State** CA **Zip** 94806

**Phone #** 510-222-4815 **Fax**

**Emergency Number**

**Radio Frequencies**

|                  |                                                                                                                      |
|------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b> | <b>Fields of Testing: Org. chem., 28' trailer lab w/truck for towing, stationary lab, specialists in air testing</b> |
| <b>Area/Zone</b> | <b>Section Laboratories 1</b>                                                                                        |

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**Organization**     **Lawrence Livermore Nat. Lab-HWM, #1554**

**Address**     **7000 East Avenue**

**City**     **Livermore**     **State**     **CA**     **Zip**     **94550**

**Phone #**     **510-294-4127**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Physical prop-  
erty tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.**  
**Laboratories**

**Area/Zone**     **3**

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**Organization**     **Matrix Environmental Laboratories Inc. - #359**

**Address**     **3017 Kilgore Road #100**

**City**     **Rancho Cordova**     **State**     **CA**     **Zip**     **95742**

**Phone #**     **916-635-3962**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Inorganic chem-  
istry, organic chemistry, organics by GC/MS, physical property tests**  
**Laboratories**

**Area/Zone**     **3**

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**Organization**     **MBT Environmental Laboratories**

**Address**     **3083 Gold Canal Drive**

**City**     **Rancho Cordova**     **State**     **CA**     **Zip**     **95670**

**Phone #**     **916-638-3696**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Full scale organic  
and inorganic analysis**  
**Laboratories**

**Area/Zone**     **1**

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|                          |                                  |              |           |            |                   |
|--------------------------|----------------------------------|--------------|-----------|------------|-------------------|
| <b>Address</b>           | <b>2292 Trade Zone Boulevard</b> |              |           |            |                   |
| <b>City</b>              | <b>San Jose</b>                  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95131-1801</b> |
| <b>Phone #</b>           | <b>408-946-3935</b>              | <b>Fax</b>   |           |            |                   |
| <b>Emergency Number</b>  |                                  |              |           |            |                   |
| <b>Radio Frequencies</b> |                                  |              |           |            |                   |

|                  |                                                                 |
|------------------|-----------------------------------------------------------------|
| <b>Resources</b> | <b>Fields of Testing: Inorganic chemistry, extraction tests</b> |
| <b>Section</b>   | <b>Laboratories Area/Zone 2</b>                                 |

**Organization** Mobile Chem Lab Inc, #1223 Stationary (#MX2172)

|                          |                                |              |           |            |              |
|--------------------------|--------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>5011 Blum Road, Suite 1</b> |              |           |            |              |
| <b>City</b>              | <b>Martinez</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94533</b> |
| <b>Phone #</b>           | <b>510-372-3700</b>            | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                |              |           |            |              |
| <b>Radio Frequencies</b> |                                |              |           |            |              |

|                         |                                   |          |
|-------------------------|-----------------------------------|----------|
| <b>Resources</b>        | <b>Fields of Testing: Organic</b> |          |
| <b>chemistrySection</b> | <b>Laboratories Area/Zone</b>     | <b>2</b> |

**Organization** Mobile Chem Lab Inc./Mobile #1, #1342 Central Valley

|                          |                                |              |           |            |              |
|--------------------------|--------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>5021 Blum Road, Suite 3</b> |              |           |            |              |
| <b>City</b>              | <b>Martinez</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94533</b> |
| <b>Phone #</b>           | <b>510-372-3700</b>            | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                |              |           |            |              |
| <b>Radio Frequencies</b> |                                |              |           |            |              |

| Resources        | Fields of Testing: Inorganic |   |
|------------------|------------------------------|---|
| chemistrySection | Laboratories Area/Zone       | 2 |

**Organization**     **Mobile Chem Lab Inc./Mobile #2, #1428 Vehicle License**

**Address**     **5021 Blum Road, Suite 3**

**City**     **Martinez**     **State**     **CA**     **Zip**     **94533**

**Phone #**     **510-372-3700**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**chemistrySection**

**Fields of Testing: Organic**

**Laboratories Area/Zone**

**2**

**Organization**     **Mobile Chem Lab Inc./Mobile #2MUZ466, #358**

**Address**     **5021 Blum, Suite 3**

**City**     **Martinez**     **State**     **CA**     **Zip**     **94533**

**Phone #**     **510-372-3700**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**istry, organic chemistrySection**

**Fields of Testing: Inorganic chem-**

**Laboratories Area/Zone**

**3**

**Organization**     **Morse Laboratories Inc. - #E 728**

**Address**     **1525 Fulton Ave.**

**City**     **Sacramento**     **State**     **CA**     **Zip**     **95825**

**Phone #**     **916-481-3141**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**ries Area/Zone**

**Fields of Testing: SectionLaborato-**

**3**



**Organization** PG&E, E. Emeryville PCB Lab

**Address** 4525 Hollis Street

**City** Emeryville **State** CA **Zip** 94608

**Phone #** 510-649-3310

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Organic chemistry**

**Alternate #: 510-649-3350**

**Laboratories Area/Zone 1**

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**Organization** Pace Laboratories Inc. - Novato, #1282

**Address** 11 Digital Drive

**City** Novato **State** CA **Zip** 94949

**Phone #** 415-883-6100

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.**

**Section**

**Laboratories Area/Zone 1**

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**Organization** Pace Laboratory, #361

**Address** 11 Digital Drive

**City** Novato **State** CA **Zip** 94949

**Phone #** 415-883-6100

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Organic chemistry. Mobile lab available from another pace office, if required.**

**Section Laboratories Area/Zone 1**

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**Organization** Pacific Chemical Lab, Inc.

**Address** 501 Army Street

**City** San Francisco

**State** CA

**Zip** 94124

**Phone #** 800-821-0050

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Marine chemist

**Alternate #:** 415-821-2201Section

**Laboratories Area/Zone** 1

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**Organization** Pacific Environmental Laboratory - #E699

**Address** 674 Harrison Street

**City** San Francisco

**State** CA

**Zip** 94107

**Phone #** 415-362-6065

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical prop-

erty tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.Section

**Laboratories**

**Area/Zone** 2

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**Organization** PG&E - Tech. & Ecological Serv. Dept., #E768

**Address** 3400 Crow Canyon Road

**City** San Ramon

**State** CA

**Zip** 94583

**Phone #** 510-886-5303

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical prop-

erty tests, organic chemistrySection

**Laboratories Area/Zone** 2

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|                          |                            |              |           |            |              |
|--------------------------|----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>4136 Lakeside Drive</b> |              |           |            |              |
| <b>City</b>              | <b>Richmond</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94806</b> |
| <b>Phone #</b>           | <b>510-223-3002</b>        | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                            |              |           |            |              |
| <b>Radio Frequencies</b> |                            |              |           |            |              |

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b>    | <b>Fields of Testing:</b> Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. |
| <b>Laboratories</b> | <b>Area/Zone</b> 3                                                                                                      |

**Organization** Resna Environmental Labs - R.C./Mobile 1, #E773

|                          |                                  |              |           |            |              |
|--------------------------|----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>3164 Gold Camp Drive #200</b> |              |           |            |              |
| <b>City</b>              | <b>Rancho Cordova</b>            | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95670</b> |
| <b>Phone #</b>           | <b>916-852-6699</b>              | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                  |              |           |            |              |
| <b>Radio Frequencies</b> |                                  |              |           |            |              |

| Resources        | Fields of Testing: Organic |   |
|------------------|----------------------------|---|
| chemistrySection | Laboratories Area/Zone     | 2 |

**Organization** Rhone - Poulenc Basic Chemicals, #1278

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>100 Mococo Road</b> |              |           |            |              |
| <b>City</b>              | <b>Martinez</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94553</b> |
| <b>Phone #</b>           | <b>510-228-5530</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources | Fields of Testing: Physical property tests, inorganic chemistry, extraction tests, organic chemistry | Section | Laboratories |
|-----------|------------------------------------------------------------------------------------------------------|---------|--------------|
| Area/Zone | 1                                                                                                    |         |              |

**Organization** Scientific Environmental Laboratory, Inc. - #1606

**Address** 924 Industrial Avenue

**City** Palo Alto **State** CA **Zip** 94303

**Phone #** 415-856-6011

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests organics by GC/MS, org. chem.  
**Laboratories** **Section** **Area/Zone** 2

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**Organization** Sequoia Analysis Lab Inc/Mobile K#1 - #1229 Veh Lic

**Address** 1900 Bates Ave., Suite L

**City** Concord **State** CA **Zip** 94520

**Phone #** 510-686-9600

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**chemistrySection** **Fields of Testing:** Organic  
**Laboratories** **Area/Zone** 1

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**Organization** Sequoia Analytical Lab - #1210

**Address** 680 Chesapeake Drive

**City** Redwood City **State** CA **Zip** 94063

**Phone #** 415-364-9600

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.  
**Laboratories** **Section** **Area/Zone** 2

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**Organization** Sequoia Analytical Lab Inc., #1271

**Address** 1900 Bates Avenue, Suite LM

**City** Concord **State** CA **Zip** 94520

**Phone #** 510-686-9600

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Inorganic chemistry, organics by GC/MS, organic chemistry, extraction tests, bioassay  
**Section** Laboratories  
**Area/Zone** 3

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**Organization** Sequoia Analytical Lab Inc. - Sacto.- #1624

**Address** 819 West Striker Avenue, Suite 8

**City** Sacramento **State** CA **Zip** 95834

**Phone #** 916-921-9600

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Inorganic chemistry, extraction tests, organic chemistry  
**Section** Laboratories  
**Area/Zone** 1

---

**Organization** Solvent Service inc. - #1495

**Address** 1040 Commercial Street, Suite 101

**City** San Jose **State** CA **Zip** 95112

**Phone #** 408-453-6046

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organic chemistry  
**Section** Laboratories  
**Area/Zone** 3

---

**Organization** Sparger Tech. Analytical Lab & Mobile Lab, #1614

**Address** 3100 Fite Circle, Suite 108

**City** Sacramento **State** CA **Zip** 95827

**Phone #** 916-362-8947

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Organic chemistry, inorganic chemistry, extraction tests, DBE.**Section Laboratories Area/Zone 2

---

**Organization** Superior Analytical, #1542

**Address** 825 Arnold Drive, Suite 114

**City** Martinez **State** CA **Zip** 94553

**Phone #** 510-229-1512

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Inorganic chemistry, extraciton tests, organic chemistry, organics by GC/MS, mobile lab**Section Laboratories Area/Zone 1

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**Organization** Superior Precision Analytical Inc. - #1332

**Address** 1555 Burke Street, Suite I

**City** San Francisco **State** CA **Zip** 94124

**Phone #** 415-647-2081

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing: Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.**Section Laboratories Area/Zone 1

---

**Organization** Trace Analysis Laboratory Inc., #1109

**Address** 3423 Investment Boulevard, Suite 8

**City** Hayward **State** CA **Zip** 94545

**Phone #** 510-783-6960

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem.  
**Section Laboratories** **Area/Zone** 3

---

**Organization** U.S. Air Force - McClellan AFB/MAT Proc. Lab, #1319

**Address** Watt Avenue

**City** North Highlands **State** CA **Zip** 95652-5990

**Phone #** 916-643-6041

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Physical property tests, inorganic chemistry, extraction tests, organic chemistry  
**Section Laboratories** **Area/Zone** 1

---

**Organization** U.S. Army - Corps of Engineers, So Pacific Div., #263

**Address** 25 Liberty Ship Way

**City** Sausalito **State** CA **Zip** 94965

**Phone #** 415-332-9690

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Fields of Testing:** Inorganic chemistry, organic chemistry  
**Section Laboratories** **Area/Zone** 3

---

**Organization** U.S. Army-Sac. Army Depot-Env. Mat Analy. Lab #1642

**Address** 8350 Fruitridge Road

**City** Sacramento

**State** CA

**Zip** 95813-5055

**Phone #** 916-388-2079

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

istry, extraction testsSection

**Fields of Testing: Inorganic chem-**

**Laboratories Area/Zone**

**1**

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**Organization** United Tech-Chem Systems Div Enviro Qual Lab #1639

**Address** 600 Metcalf Road, Building 1920

**City** San Jose

**State** CA

**Zip** 95138

**Phone #** 408-778-4214

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

MS, organic chemistry, microbiology of water, biological oxygen demandSection Laboratories Area/Zone

**3**

**Fields of Testing: Organics by GC/**

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**Organization** Western Enviro. Sci & Tech Stationary - #1346

**Address** 1046 Olive Drive, Suite 3

**City** Davis

**State** CA

**Zip** 95616

**Phone #** 916-753-9500

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

erty tests, inorganic chem., extraction tests, organics by GC/MS, organic chem.Section Laboratories Area/Zone

**3**

**Fields of Testing: Physical prop-**

|                          |                                       |              |              |
|--------------------------|---------------------------------------|--------------|--------------|
| <b>Address</b>           | <b>212 Frank West Circle, Suite A</b> |              |              |
| <b>City</b>              | <b>Stockton</b>                       | <b>State</b> | <b>CA</b>    |
|                          |                                       | <b>Zip</b>   | <b>95206</b> |
| <b>Phone #</b>           | <b>209-983-1340</b>                   | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                       |              |              |
| <b>Radio Frequencies</b> |                                       |              |              |

|                     |                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Resources</b>    | <b>Fields of Testing:</b> Physical property tests, inorganic chemistry, extraction tests, organics by GC/MS, org. chem. |
| <b>Laboratories</b> | <b>Area/Zone</b> 2                                                                                                      |

|                   |                                                   |       |    |     |       |
|-------------------|---------------------------------------------------|-------|----|-----|-------|
| Organization      | Woodward-Clyde Consultants, #1439 Analy. Chem Lab |       |    |     |       |
| Address           | 3400 Vincent Road                                 |       |    |     |       |
| City              | Pleasant Hill                                     | State | CA | Zip | 94523 |
| Phone #           | 510-746-6641                                      | Fax   |    |     |       |
| Emergency Number  |                                                   |       |    |     |       |
| Radio Frequencies |                                                   |       |    |     |       |

|                                                                      |                                          |
|----------------------------------------------------------------------|------------------------------------------|
| <b>Resources</b>                                                     | <b>Fields of Testing: Physical prop-</b> |
| erty tests, inorganic chemistry, extraction tests, organic chemistry | <b>Section Laboratories</b>              |
| <b>Area/Zone</b>                                                     | <b>2</b>                                 |

|                   |                                               |       |    |     |       |
|-------------------|-----------------------------------------------|-------|----|-----|-------|
| Organization      | Zenaca Ag. Products-West. Research Ctr. #1516 |       |    |     |       |
| Address           | 1200 South 47th Street                        |       |    |     |       |
| City              | Richmond                                      | State | CA | Zip | 94804 |
| Phone #           | 510-231-1000                                  | Fax   |    |     |       |
| Emergency Number  |                                               |       |    |     |       |
| Radio Frequencies |                                               |       |    |     |       |

| Resources  | Fields of Testing: Physical property tests, inorganic chemistry, extraction tests, organic chemistry |
|------------|------------------------------------------------------------------------------------------------------|
| Facilities | Section 1                                                                                            |
| Area/Zone  | Water Intake                                                                                         |









|                          |                                                  |            |
|--------------------------|--------------------------------------------------|------------|
| <b>Address</b>           | <b>Mowry Intake at Mowry Slough/Coyote Creek</b> |            |
| <b>City</b>              | <b>State</b>                                     | <b>Zip</b> |
| <b>Phone #</b>           | <b>510-790-8154</b>                              | <b>Fax</b> |
| <b>Emergency Number</b>  |                                                  |            |
| <b>Radio Frequencies</b> |                                                  |            |

| Resources         | Salt Pond Intake | Section | Water |
|-------------------|------------------|---------|-------|
| Intake Facilities | Area/Zone        | 1       |       |

**Organization**      **Cargill/Leslie Operations**

|                          |                                                 |              |            |
|--------------------------|-------------------------------------------------|--------------|------------|
| <b>Address</b>           | <b>Coyote Intake - Along Coyote Hill Slough</b> | <b>State</b> | <b>Zip</b> |
| <b>City</b>              |                                                 |              |            |
| <b>Phone #</b>           | <b>510-790-8154</b>                             | <b>Fax</b>   |            |
| <b>Emergency Number</b>  |                                                 |              |            |
| <b>Radio Frequencies</b> |                                                 |              |            |

| Resources         | Salt Pond Intake | Section | Water |
|-------------------|------------------|---------|-------|
| Intake Facilities | Area/Zone        | 1       |       |

**Organization**      **Cargill/Leslie Salt Operations**

|                          |                                                   |            |              |            |
|--------------------------|---------------------------------------------------|------------|--------------|------------|
| <b>Address</b>           | <b>Cal Hill Intake - Along Coyote Hill Slough</b> |            | <b>State</b> | <b>Zip</b> |
| <b>City</b>              |                                                   |            |              |            |
| <b>Phone #</b>           | <b>510-790-8154</b>                               | <b>Fax</b> |              |            |
| <b>Emergency Number</b>  |                                                   |            |              |            |
| <b>Radio Frequencies</b> |                                                   |            |              |            |

| Resources         | Salt Pond Intake | Section | Water |
|-------------------|------------------|---------|-------|
| Intake Facilities | Area/Zone        | 1       |       |





|                          |  |                           |                      |
|--------------------------|--|---------------------------|----------------------|
| <b>Address</b>           |  |                           |                      |
| <b>City</b>              |  | <b>State</b>              | <b>Zip</b>           |
| <b>Phone #</b>           |  | <b>Fax</b>                |                      |
| <b>Emergency Number</b>  |  |                           |                      |
| <b>Radio Frequencies</b> |  |                           |                      |
| <b>Resources</b>         |  | <b>Power Plant Intake</b> | <b>Section Water</b> |
| <b>Intake Facilities</b> |  | <b>Area/Zone</b>          | <b>2</b>             |

|                          |                  |                                  |              |
|--------------------------|------------------|----------------------------------|--------------|
| <b>Address</b>           |                  |                                  |              |
| <b>City</b>              | <b>Pittsburg</b> | <b>State</b>                     | <b>CA</b>    |
|                          |                  | <b>Zip</b>                       |              |
| <b>Phone #</b>           |                  | <b>Fax</b>                       |              |
| <b>Emergency Number</b>  |                  |                                  |              |
| <b>Radio Frequencies</b> |                  |                                  |              |
| <b>Resources</b>         |                  | <b>Power Plant IntakeSection</b> | <b>Water</b> |
| <b>Intake Facilities</b> |                  | <b>Area/Zone</b>                 | <b>1</b>     |

|                          |                      |                           |                |
|--------------------------|----------------------|---------------------------|----------------|
| <b>Address</b>           |                      |                           |                |
| <b>City</b>              | <b>San Francisco</b> | <b>State</b>              | <b>CA</b>      |
|                          |                      | <b>Zip</b>                |                |
| <b>Phone #</b>           |                      | <b>Fax</b>                |                |
| <b>Emergency Number</b>  |                      |                           |                |
| <b>Radio Frequencies</b> |                      |                           |                |
| <b>Resources</b>         |                      | <b>Power Plant Intake</b> | <b>Section</b> |
| <b>Intake Facilities</b> |                      | <b>Area/Zone</b>          | <b>2</b>       |

**Organization**     **Union Oil Refinery Water Intake**

**Address**

**City**     **Richmond**     **State**   **CA**     **Zip**

**Phone #**     **Fax**

**Emergency Number**

**Radio Frequencies**

|                          |                        |                |              |
|--------------------------|------------------------|----------------|--------------|
| <b>Resources</b>         | <b>Industry Intake</b> | <b>Section</b> | <b>Water</b> |
| <b>Intake Facilities</b> | <b>Area/Zone</b>       | <b>2</b>       |              |

---

**Organization**     **Unocal Refinery Intake**

**Address**   **San Pablo Bay, East of Rodeo**

**City**     **San Pablo**     **State**   **CA**     **Zip**

**Phone #**     **Fax**

**Emergency Number**

**Radio Frequencies**

|                               |                        |                |                 |
|-------------------------------|------------------------|----------------|-----------------|
| <b>Resources</b>              | <b>Industry Intake</b> | <b>Section</b> | <b>Environ-</b> |
| <b>mental Interest Groups</b> | <b>Area/Zone</b>       | <b>3</b>       |                 |

---

**Organization**     **American Fisheries society of California**

**Address**   **1701 Nimbus Road., Suite B**

**City**     **Rancho Cordova**     **State**   **CA**     **Zip**   **95670**

**Phone #**     **Fax**

**Emergency Number**

**Radio Frequencies**

|                        |                  |                      |
|------------------------|------------------|----------------------|
| <b>Resources</b>       | <b>Section</b>   | <b>Environmental</b> |
| <b>Interest Groups</b> | <b>Area/Zone</b> | <b>1</b>             |

---



|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 599</b> |              |           |            |              |
| <b>City</b>              | <b>Mill Valley</b>  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94942</b> |
| <b>Phone #</b>           |                     | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

**Organization      Audoban Society - Sequoia Chapter**

|                          |                                   |              |              |
|--------------------------|-----------------------------------|--------------|--------------|
| <b>Address</b>           | <b>30 W. 39th Ave., Suite 202</b> |              |              |
| <b>City</b>              | <b>San Mateo</b>                  | <b>State</b> | <b>CA</b>    |
|                          |                                   | <b>Zip</b>   | <b>94403</b> |
| <b>Phone #</b>           | <b>415-345-3724</b>               | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                   |              |              |
| <b>Radio Frequencies</b> |                                   |              |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

**Organization** Baykeeper - San Francisco Bay & Delta

|                          |                                   |              |           |            |              |
|--------------------------|-----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Fort Mason Center, Bldg. A</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94123</b> |
| <b>Phone #</b>           | <b>415-567-4401</b>               | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                   |              |           |            |              |
| <b>Radio Frequencies</b> |                                   |              |           |            |              |

| Resources<br>Interest Groups | Section<br>Area/Zone | Environmental<br>1 |
|------------------------------|----------------------|--------------------|
|------------------------------|----------------------|--------------------|

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>3430 Chanate Road</b> |              |           |            |              |
| <b>City</b>              | <b>Santa Rosa</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95404</b> |
| <b>Phone #</b>           | <b>707-523-2473</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

**Organization**      **California Center for Wildlife**

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 150957</b> |              |           |            |              |
| <b>City</b>              | <b>San Rafael</b>      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94915</b> |
| <b>Phone #</b>           | <b>415-456-7286</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 2             |

**Organization**      **California Native Plant Association**

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>909 12th Street</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-447-2677</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 2             |

|                          |                                        |              |              |
|--------------------------|----------------------------------------|--------------|--------------|
| <b>Address</b>           | <b>4630 Northgate Blvd., Suite 150</b> |              |              |
| <b>City</b>              | <b>Sacramento</b>                      | <b>State</b> | <b>CA</b>    |
|                          |                                        | <b>Zip</b>   | <b>95834</b> |
| <b>Phone #</b>           | <b>916-648-1406</b>                    | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                        |              |              |
| <b>Radio Frequencies</b> |                                        |              |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

|                          |                                      |              |           |            |              |
|--------------------------|--------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>580 Market Street., Suite 550</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94104</b> |
| <b>Phone #</b>           | <b>415-391-6204</b>                  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                      |              |           |            |              |
| <b>Radio Frequencies</b> |                                      |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

|                          |                                      |              |           |            |              |
|--------------------------|--------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>World Trade Center, Suite 317</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>                 | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94111</b> |
| <b>Phone #</b>           | <b>415-788-6150</b>                  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                      |              |           |            |              |
| <b>Radio Frequencies</b> |                                      |              |           |            |              |

| Resources<br>Interest Groups | Section<br>Area/Zone | Environmental<br>1 |
|------------------------------|----------------------|--------------------|
|------------------------------|----------------------|--------------------|

|                          |              |                  |                      |
|--------------------------|--------------|------------------|----------------------|
| <b>Address</b>           |              |                  |                      |
| <b>City</b>              | <b>State</b> | <b>Zip</b>       |                      |
| <b>Phone #</b>           | <b>Fax</b>   |                  |                      |
| <b>Emergency Number</b>  |              |                  |                      |
| <b>Radio Frequencies</b> |              |                  |                      |
| <b>Resources</b>         |              | <b>Section</b>   | <b>Environmental</b> |
| <b>Interest Groups</b>   |              | <b>Area/Zone</b> | <b>1</b>             |

**Organization**      **Environmental Defense Fund**

|                          |                                     |                  |               |
|--------------------------|-------------------------------------|------------------|---------------|
| <b>Address</b>           | <b>5655 College Ave., Suite 304</b> |                  |               |
| <b>City</b>              | <b>Oakland</b>                      | <b>State</b>     | <b>CA</b>     |
|                          |                                     | <b>Zip</b>       | <b>94618</b>  |
| <b>Phone #</b>           | <b>510-658-8008</b>                 | <b>Fax</b>       |               |
| <b>Emergency Number</b>  |                                     |                  |               |
| <b>Radio Frequencies</b> |                                     |                  |               |
| <b>Resources</b>         |                                     | <b>Section</b>   | <b>Enviro</b> |
| <b>Interest Groups</b>   |                                     | <b>Area/Zone</b> | <b>2</b>      |

**Organization**      **Friends of the Sea Lion**

|                          |                                 |  |              |                  |                      |              |
|--------------------------|---------------------------------|--|--------------|------------------|----------------------|--------------|
| <b>Address</b>           | <b>20612 Laguna Canyon Road</b> |  | <b>State</b> | <b>CA</b>        | <b>Zip</b>           | <b>92651</b> |
| <b>City</b>              | <b>Laguna Beach</b>             |  |              |                  |                      |              |
| <b>Phone #</b>           | <b>714-494-3050</b>             |  | <b>Fax</b>   |                  |                      |              |
| <b>Emergency Number</b>  |                                 |  |              |                  |                      |              |
| <b>Radio Frequencies</b> |                                 |  |              |                  |                      |              |
| <b>Resources</b>         |                                 |  |              | <b>Section</b>   | <b>Environmental</b> |              |
| <b>Interest Groups</b>   |                                 |  |              | <b>Area/Zone</b> | <b>1</b>             |              |

**Organization**    **Greenpeace**

**Address**    **139 Townsend, 4th Floor**

**City**        **San Francisco**

**State**    **CA**

**Zip**        **94107**

**Phone #**    **415-512-9025**

**Fax**        **415-512-8699**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

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**Organization**    **Hayward Shoreline Interpretive Center**

**Address**    **4901 Breakwater Ave.**

**City**        **Hayward**

**State**    **CA**

**Zip**        **94545**

**Phone #**    **510-881-6751**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

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**Organization**    **Injured and Orphaned Wildlife**

**Address**    **P.O. Box 6793**

**City**        **San Jose**

**State**    **CA**

**Zip**        **95150**

**Phone #**    **408-946-4212**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

|                          |                                     |              |              |
|--------------------------|-------------------------------------|--------------|--------------|
| <b>Address</b>           | <b>699 Potter St., Aquatic Park</b> |              |              |
| <b>City</b>              | <b>Berkeley</b>                     | <b>State</b> | <b>CA</b>    |
|                          |                                     | <b>Zip</b>   | <b>94710</b> |
| <b>Phone #</b>           | <b>510-841-9086</b>                 | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                     |              |              |
| <b>Radio Frequencies</b> |                                     |              |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

**Organization**      **League of Conservation Voters**

|                          |                               |              |           |            |              |
|--------------------------|-------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>965 Mission, Suite 705</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>          | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94103</b> |
| <b>Phone #</b>           |                               | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                               |              |           |            |              |
| <b>Radio Frequencies</b> |                               |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

## Organization      Local Government Coordination Program

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>7120 Cliff Avenue</b> |              |           |            |              |
| <b>City</b>              | <b>Bodega Bay</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94923</b> |
| <b>Phone #</b>           | <b>707-875-3482</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

**Resources** Alternate #: 707-875-2345  
**Environmental Interest Groups** Section Area/Zone 1



**Organization**    **National Audoban Society**

**Address**    **55 Audoban Way**

**City**        **Sacramento**                      **State**    **CA**                      **Zip**    **95814**

**Phone #**    **916-481-5332**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization**    **National Wildlife Federation**

**Address**    **4029 Loazll Street**

**City**        **Sacramento**                      **State**    **CA**                      **Zip**    **95825**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**    **Natural Resources Defense Council**

**Address**    **71 Stevenson Street, Suite 1825**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**    **94105**

**Phone #**    **415-777-0220**

**Fax**    **415-495-5996**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---



**Organization**    **Ocean Alliance**

**Address**    **Fort Mason Center, Bldg. E**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**        **94123**

**Phone #**    **415-441-5970**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**    **Ocean Research Institute**

**Address**    **300 Newhall Street**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**        **94124**

**Phone #**    **415-285-0500**

**Fax**        **415-641-4186**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**    **Oil Spill Response Network (OSRN)**

**Address**    **1001 Bridgeway, Suite 716**

**City**        **Sausalito**                      **State**    **CA**                      **Zip**        **94965**

**Phone #**    **415-332-8589**

**Fax**        **800-333-0729**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization    Orcas**

**Address    2901 Via Alvarado**

**City        Palos Verde Est.**

**State    CA**

**Zip        90274**

**Phone #    310-544-9886**

**Fax        310-541-5742**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization    Pacific Coast Fed. of Fishermen's Associations Inc.**

**Address    P.O. Box 989**

**City        Sausalito**

**State    CA**

**Zip        94966**

**Phone #    415-332-5080**

**Fax        415-331-2722**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization    Pacific Seabird Group**

**Address    4990 Shoreline Highway**

**City        Stinson Beach**

**State    CA**

**Zip        94970**

**Phone #    916-752-1300**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization Peninsula Humane Society - Wildlife Care Center**

**Address 12 Airport Blvd.**

**City San Mateo State CA Zip 94401-1098**

**Phone # 415-340-7022**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization Planning and Conservation League**

**Address 923 J Street**

**City Sacramento State CA Zip 95814**

**Phone # 916-444-8726**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Alternate #: 916-448-1789Section**

**Environmental Interest Groups**

**Area/Zone**

**1**

---

**Organization Point Reyes Bird Observatory**

**Address 4990 Shoreside Highway**

**City Stinson Beach State CA Zip 94970**

**Phone # 415-868-1221**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**     **Romberg Center**

**Address**   **P.O. Box 855**

**City**       **Tiburon**

**State**   **CA**

**Zip**     **94920**

**Phone #**   **415-435-7100**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 415-229-1052**

**Boat Cell: 415-710-1951**

**Section     Environmental Interest Groups**

**Area/Zone**

**2**

---

**Organization**     **S.F. Bay & Delta Aquatic Habitat Institute**

**Address**   **180 Richmond fields Staiton, 1301 South 46**

**City**       **Richmond**

**State**   **CA**

**Zip**     **94804**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**     **S.F. SPCA**

**Address**

**City**

**State**

**Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

## Address

**City**     **Alviso**                      **State**   **CA**                      **Zip**    **95002**

**Phone #** **Fax**

## Emergency Number

## Radio Frequencies

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 2             |

## Address

**City** **State** **Zip**

**Phone # 805-687-3255 Fax**

## Emergency Number

## Radio Frequencies

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

**Address** 1736 Franklin Street

|      |         |       |    |     |       |
|------|---------|-------|----|-----|-------|
| City | Oakland | State | CA | Zip | 94612 |
|------|---------|-------|----|-----|-------|

**Phone # 415-452-9261 Fax**

## Emergency Number

## Radio Frequencies

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 2             |



**Organization**    **Sierra Club - Bay Chapter**

**Address**    **6014 College Avenue**

**City**        **Oakland**

**State**   **CA**

**Zip**       **94618**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization**    **Sierra Club of California**

**Address**    **923 12th #200**

**City**        **Sacramento**

**State**   **CA**

**Zip**       **95814**

**Phone #**    **916-557-1100**

**Fax**       **916-557-9669**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**    **Sonoma Wildlife Rehabilitation - Cotati**

**Address**

**City**

**State**

**Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**     **Steinhart Aquarium**

**Address**     **Golden Gate Park**

**City**     **San Francisco**

**State**     **CA**

**Zip**     **94118**

**Phone #**     **415-750-7250**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**     **Sulfer Creek Nature Center - Hayward**

**Address**

**City**

**State**

**Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

---

**Organization**     **The Lindsay Museum**

**Address**     **1901 First Ave.**

**City**     **Walnut Creek**

**State**     **CA**

**Zip**     **94596**

**Phone #**     **510-935-1988**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**2**

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|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>428 J Street</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-477-9379</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 1             |

## Organization      The Nature Conservancy

|                          |                                       |              |           |            |              |
|--------------------------|---------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>785 Market Street, Third Floor</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>                  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94103</b> |
| <b>Phone #</b>           | <b>415-777-0487</b>                   | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                       |              |           |            |              |
| <b>Radio Frequencies</b> |                                       |              |           |            |              |

| Resources       | Section   | Environmental |
|-----------------|-----------|---------------|
| Interest Groups | Area/Zone | 2             |

## Organization      Trust for Public Lands

|                          |                                |              |           |            |              |
|--------------------------|--------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>926 J Street, Suite 612</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-557-1673</b>            | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                |              |           |            |              |
| <b>Radio Frequencies</b> |                                |              |           |            |              |

| Resources<br>Interest Groups | Section<br>Area/Zone | Environmental<br>1 |
|------------------------------|----------------------|--------------------|
|------------------------------|----------------------|--------------------|

**Organization**     **USFWS - S.F. Bay National Wildlife Refuge**

**Address**     **P.O. Box 524**

**City**     **Newark**     **State**     **CA**     **Zip**     **94560**

**Phone #**     **510-792-0222**

**Fax**     **510-792-5828**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

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**Organization**     **Wildlife Rescue Inc. - Palo Alto**

**Address**

**City**     **Palo Alto**     **State**     **CA**     **Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Environmental**

**Interest Groups**

**Area/Zone**

**1**

---

**Organization**     **Youth Science Institute - San Jose**

**Address**

**City**     **State**     **Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Airports and Air-**

**craft Rental**

**Area/Zone**

---

**Organization**

|                              |                |                                        |
|------------------------------|----------------|----------------------------------------|
| <b>Address</b>               |                |                                        |
| <b>City</b>                  | <b>State</b>   | <b>Zip</b>                             |
| <b>Phone #</b>               | <b>Fax</b>     |                                        |
| <b>Emergency Number</b>      |                |                                        |
| <b>Radio Frequencies</b>     |                |                                        |
| <b>Resources</b>             |                | <b>See Annex F and J, Appendix II,</b> |
| <b>Tab I, Air Operations</b> | <b>Section</b> | <b>Trucking Companies and Car</b>      |
| <b>Rental Companies</b>      |                | <b>Area/Zone</b>                       |

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**Organization**

|                                 |                |                                          |
|---------------------------------|----------------|------------------------------------------|
| <b>Address</b>                  |                |                                          |
| <b>City</b>                     | <b>State</b>   | <b>Zip</b>                               |
| <b>Phone #</b>                  | <b>Fax</b>     |                                          |
| <b>Emergency Number</b>         |                |                                          |
| <b>Radio Frequencies</b>        |                |                                          |
| <b>Resources</b>                |                | <b>Refer to appropriate phone direc-</b> |
| <b>tories and county plans.</b> | <b>Section</b> | <b>NOAA Weather Service</b>              |
| <b>1</b>                        |                | <b>Area/Zone</b>                         |

---

**Organization**    **Codar Ocean Sensors - Donald Barrick**

|                          |                                   |              |              |
|--------------------------|-----------------------------------|--------------|--------------|
| <b>Address</b>           | <b>1000 Fremont Ave., Sutie K</b> |              |              |
| <b>City</b>              | <b>Los Altos</b>                  | <b>State</b> | <b>CA</b>    |
|                          |                                   | <b>Zip</b>   | <b>94024</b> |
| <b>Phone #</b>           | <b>408-773-8240</b>               | <b>Fax</b>   |              |
| <b>Emergency Number</b>  |                                   |              |              |
| <b>Radio Frequencies</b> |                                   |              |              |

|                  |                  |                |                     |
|------------------|------------------|----------------|---------------------|
| <b>Resources</b> |                  | <b>Section</b> | <b>NOAA Weather</b> |
| <b>Service</b>   | <b>Area/Zone</b> | <b>1</b>       |                     |

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**Organization**    **NOAA - National Weather Service Office**

**Address**    **660 Price Ave.**

**City**        **Redwood City**

**State**   **CA**

**Zip**        **94063**

**Phone #**   **415-364-7974**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**NOAA Weather**

**Service**   **Area/Zone**

**5**

---

**Organization**    **NOAA Ocean Applications Branch**

**Address**    **7 Grace Hopper Ave., Stop 1**

**City**        **Monterey**

**State**   **CA**

**Zip**        **93943-5501**

**Phone #**   **408-647-4211**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Media**

**Area/Zone**

**1**

---

**Organization**    **KCBS Radio Station**

**Address**

**City**        **San Francisco**

**State**   **CA**

**Zip**        **94111**

**Phone #**   **415-765-4074**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Media**

**Area/Zone**

**1**

---

**Organization**    **KGO (Channel 7 T.V. Station)**

**Address**

**City**        **San Francisco**                      **State**   **CA**                      **Zip**    **94111**

**Phone #**   **415-954-7321**

**Fax**

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Media</b> | <b>Area/Zone</b> |
|------------------|----------------|--------------|------------------|
| <b>1</b>         |                |              |                  |

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---

**Organization**    **KGO Radio Station**

**Address**

**City**        **San Francisco**                      **State**   **CA**                      **Zip**    **94111**

**Phone #**   **415-954-8142**

**Fax**

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b>          | <b>Alternate #: 415-362-4809</b> | <b>Section</b> |
|---------------------------|----------------------------------|----------------|
| <b>Media    Area/Zone</b> |                                  | <b>1</b>       |

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**Organization**    **KNBR Radio Station**

**Address**

**City**        **San Francisco**                      **State**   **CA**                      **Zip**    **94111**

**Phone #**   **415-951-7014**

**Fax**    **415-951-7017**

**Emergency Number**

**Radio Frequencies**

| <b>Resources</b> | <b>Section</b> | <b>Media</b> | <b>Area/Zone</b> |
|------------------|----------------|--------------|------------------|
| <b>1</b>         |                |              |                  |

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|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 599</b> |              |           |            |              |
| <b>City</b>              | <b>Mill Valley</b>  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94942</b> |
| <b>Phone #</b>           |                     | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization      Audoban Society - Sequoia Chapter**

|                          |                                   |              |           |            |              |
|--------------------------|-----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>30 W. 39th Ave., Suite 202</b> |              |           |            |              |
| <b>City</b>              | <b>San Mateo</b>                  | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94403</b> |
| <b>Phone #</b>           | <b>415-435-3724</b>               | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                   |              |           |            |              |
| <b>Radio Frequencies</b> |                                   |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization** Baykeeper - San Francisco Bay & Delta

|                          |                                   |              |           |            |              |
|--------------------------|-----------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Fort Mason Center, Bldg. A</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94123</b> |
| <b>Phone #</b>           | <b>415-567-4401</b>               | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                   |              |           |            |              |
| <b>Radio Frequencies</b> |                                   |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |



|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>3430 Chanate Road</b> |              |           |            |              |
| <b>City</b>              | <b>Santa Rosa</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95404</b> |
| <b>Phone #</b>           | <b>707-523-2473</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization**      **California Center for Wildlife**

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 150957</b> |              |           |            |              |
| <b>City</b>              | <b>San Rafael</b>      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94915</b> |
| <b>Phone #</b>           | <b>415-456-7286</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |

**Organization**      **California Coastal Commission**

|                          |                                      |              |                     |            |                   |
|--------------------------|--------------------------------------|--------------|---------------------|------------|-------------------|
| <b>Address</b>           | <b>45 Fremont Street, Suite 2000</b> |              |                     |            |                   |
| <b>City</b>              | <b>San Francisco</b>                 | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94105-2219</b> |
| <b>Phone #</b>           | <b>415-904-5240</b>                  | <b>Fax</b>   | <b>415-940-5200</b> |            |                   |
| <b>Emergency Number</b>  |                                      |              |                     |            |                   |
| <b>Radio Frequencies</b> |                                      |              |                     |            |                   |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |

|                          |                        |              |           |            |              |
|--------------------------|------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>909 12th Street</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-447-2677</b>    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                        |              |           |            |              |
| <b>Radio Frequencies</b> |                        |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |
| Area/Zone |         |                     |

**Organization**      **California Wetlands Association**

|                          |                                        |              |           |            |              |
|--------------------------|----------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>4630 Northgate Blvd., Suite 150</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>                      | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95834</b> |
| <b>Phone #</b>           | <b>916-648-1406</b>                    | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                        |              |           |            |              |
| <b>Radio Frequencies</b> |                                        |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |

**Organization**      **Center for Marine Conservation**

|                          |                                     |              |           |            |              |
|--------------------------|-------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>580 Market Street, Suite 550</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94104</b> |
| <b>Phone #</b>           | <b>415-391-6204</b>                 | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                     |              |           |            |              |
| <b>Radio Frequencies</b> |                                     |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |

**Organization**    **Coastal Resources Center**

**Address**    **World Trade Center, Suite 317**

**City**        **San Francisco**                      **State**    **CA**                      **Zip**    **94111**

**Phone #**    **415-788-6150**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**        **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization**    **Coyote Point Museum - San Mateo**

**Address**

**City**                                      **State**                                      **Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**        **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization**    **Environmental Defense Fund**

**Address**    **5655 College Avenue, Suite 304**

**City**        **Oakland**                      **State**    **CA**                      **Zip**    **94618**

**Phone #**    **510-658-8008**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**        **Area/Zone**

**Section**

**2**

**Volunteer Organiza-**

**Organization**    **Friends of the Sea Lion**

**Address**    **20612 Laguna Canyon Road**

**City**        **Laguna Beach**

**State**   **CA**

**Zip**       **92651**

**Phone #**   **714-494-3050**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**      **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization**    **Greenpeace**

**Address**    **139 Townsend, 4th Floor**

**City**        **San Francisco**

**State**   **CA**

**Zip**       **94107**

**Phone #**   **415-512-9025**

**Fax**       **415-512-8699**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**      **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization**    **Hayward Shoreline Interpretive Center**

**Address**    **4901 Breakwater Ave.**

**City**        **Hayward**

**State**   **CA**

**Zip**       **94545**

**Phone #**   **510-881-6751**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**      **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

**Organization Injured and Orphaned Wildlife**

**Address P.O. Box 6793**

**City San Jose State CA Zip 95150**

**Phone # 408-946-4212**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions Area/Zone**

**2**

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**Organization International Bird Rescue Research Center**

**Address 699 Potter St., Aquatic Park**

**City Berkeley State CA Zip 94710**

**Phone # 510-841-9086**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions Area/Zone**

**1**

---

**Organization League of Conservation Voters**

**Address 965 Mission, Suite 705**

**City San Francisco State CA Zip 94103**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions Area/Zone**

**1**

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>7120 Cliff Avenue</b> |              |           |            |              |
| <b>City</b>              | <b>Bodega Bay</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94923</b> |
| <b>Phone #</b>           | <b>707-875-3482</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

**Resources** Alternate #: 707-875-2345Section  
**Volunteer Organizations** Area/Zone 1

**Organization**     **Marin Conservation League**

|                          |                                    |              |                     |            |              |
|--------------------------|------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>35 Mitchell Blvd., Suite 11</b> |              |                     |            |              |
| <b>City</b>              | <b>San Rafael</b>                  | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94903</b> |
| <b>Phone #</b>           | <b>415-472-6170</b>                | <b>Fax</b>   | <b>415-472-1404</b> |            |              |
| <b>Emergency Number</b>  |                                    |              |                     |            |              |
| <b>Radio Frequencies</b> |                                    |              |                     |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |

**Organization**      **Marine Mammal Center**

|                          |                               |              |           |            |              |
|--------------------------|-------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Marine Headlands GGNRA</b> |              |           |            |              |
| <b>City</b>              | <b>Sausalito</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94965</b> |
| <b>Phone #</b>           | <b>415-289-7325</b>           | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                               |              |           |            |              |
| <b>Radio Frequencies</b> |                               |              |           |            |              |

**Resources** **Director: 415-383-4252**  
**unteer Organizations** **Section Vol-**  
**Area/Zone 2**

|                          |                             |              |           |            |              |
|--------------------------|-----------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>Marine World Parkway</b> |              |           |            |              |
| <b>City</b>              | <b>Vallejo</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94589</b> |
| <b>Phone #</b>           | <b>707-644-4000</b>         | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                             |              |           |            |              |
| <b>Radio Frequencies</b> |                             |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |
| Area/Zone |         |                     |

**Organization**      **National Audoban Society**

|                          |                          |              |           |            |              |
|--------------------------|--------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>555 Audoban Place</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>        | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-841-5332</b>      | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                          |              |           |            |              |
| <b>Radio Frequencies</b> |                          |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |
| Area/Zone |         |                     |

**Organization**      **National Wildlife Federation**

|                          |                           |              |           |            |              |
|--------------------------|---------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>4029 Loazll Street</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>         | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95825</b> |
| <b>Phone #</b>           |                           | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                           |              |           |            |              |
| <b>Radio Frequencies</b> |                           |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |

|                          |                                        |              |                     |            |              |
|--------------------------|----------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>71 Stevenson Street, Suite 1825</b> |              |                     |            |              |
| <b>City</b>              | <b>San Francisco</b>                   | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94105</b> |
| <b>Phone #</b>           | <b>415-777-0220</b>                    | <b>Fax</b>   | <b>415-495-5996</b> |            |              |
| <b>Emergency Number</b>  |                                        |              |                     |            |              |
| <b>Radio Frequencies</b> |                                        |              |                     |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization**      **Ocean Alliance**

|                          |                               |              |    |            |       |
|--------------------------|-------------------------------|--------------|----|------------|-------|
| <b>Address</b>           | fort Mason Center, Building E |              |    |            |       |
| <b>City</b>              | San Francisco                 | <b>State</b> | CA | <b>Zip</b> | 94123 |
| <b>Phone #</b>           | 415-441-5970                  | <b>Fax</b>   |    |            |       |
| <b>Emergency Number</b>  |                               |              |    |            |       |
| <b>Radio Frequencies</b> |                               |              |    |            |       |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization**      **Ocean Research Institute**

|                          |                           |              |                     |            |              |
|--------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>300 Newhall Street</b> |              |                     |            |              |
| <b>City</b>              | <b>San Francisco</b>      | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94124</b> |
| <b>Phone #</b>           | <b>415-285-0500</b>       | <b>Fax</b>   | <b>415-641-4186</b> |            |              |
| <b>Emergency Number</b>  |                           |              |                     |            |              |
| <b>Radio Frequencies</b> |                           |              |                     |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |





**Organization Peninsula Humane Society-Wildlife Care Center**

**Address 12 Airport Blvd**

**City San Mateo**

**State CA**

**Zip**

**94401-1098**

**Phone # 415-340-7022**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions Area/Zone**

**Section**

**2**

**Volunteer Organiza-**

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**Organization Planning and Conservation League**

**Address 923 J Street, Suite 612**

**City Sacramento**

**State CA**

**Zip**

**95814**

**Phone # 916-444-8726**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Volunteer Organizations**

**Alternate : 916-448-1789Section**

**Area/Zone**

**1**

---

**Organization Point Reyes Bird Observatory**

**Address 4990 Shoreside Highway**

**City Stinson Beach**

**State CA**

**Zip**

**94970**

**Phone # 415-868-1221**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization Romberg Center**

**Address** P.O. Box 855  
**City** Tiburon **State** CA **Zip** 94920

**Phone #** 415-435-7100 **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Boat Cell: 415-710-1951**  
**24 Hours: 415-229-1052** **Section** **Volunteer Organizations** **Area/Zone**  
**2**

---

**Organization** S.F. Bay & Delta Aquatic Habitat Institute

**Address** 180 Richmond Field Station, 1301 South 46  
**City** Richmond **State** CA **Zip** 94804

**Phone #** **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Volunteer Organiza-**  
**tions** **Area/Zone** **1**

---

**Organization** S.F. SPCA

**Address**  
**City** **State** **Zip**

**Phone #** **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources** **Section** **Volunteer Organiza-**  
**tions** **Area/Zone** **1**

---

## Address

|             |               |              |           |            |              |
|-------------|---------------|--------------|-----------|------------|--------------|
| <b>City</b> | <b>Alviso</b> | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95002</b> |
|-------------|---------------|--------------|-----------|------------|--------------|

**Phone #** **Fax**

## Emergency Number

## Radio Frequencies

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |
| Area/Zone |         |                     |

**Organization** Santa Barbara Marine Mammal Center

## Address

**City** **State** **Zip**

**Phone # 805-687-3255 Fax**

## Emergency Number

## Radio Frequencies

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |

**Organization** Save San Francisco Bay Association

|         |                      |       |    |     |       |
|---------|----------------------|-------|----|-----|-------|
| Address | 1736 Franklin Street |       |    |     |       |
| City    | Oakland              | State | CA | Zip | 94612 |

**Phone # 415-452-9261 Fax**

## Emergency Number

## Radio Frequencies

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |
| Area/Zone |         |                     |

|                          |                              |                |                            |
|--------------------------|------------------------------|----------------|----------------------------|
| <b>Address</b>           | <b>9500 Gilman Dr., 0210</b> |                |                            |
| <b>City</b>              | <b>La Jolla</b>              | <b>State</b>   | <b>CA</b>                  |
|                          |                              | <b>Zip</b>     | <b>92093-0210</b>          |
| <b>Phone #</b>           | <b>619-534-3624</b>          | <b>Fax</b>     |                            |
| <b>Emergency Number</b>  |                              |                |                            |
| <b>Radio Frequencies</b> |                              |                |                            |
| <b>Resources</b>         |                              | <b>Section</b> | <b>Volunteer Organiza-</b> |
| <b>tions</b>             | <b>Area/Zone</b>             | <b>2</b>       |                            |

|                          |                     |                |                            |
|--------------------------|---------------------|----------------|----------------------------|
| <b>Address</b>           |                     | <b>State</b>   | <b>Zip</b>                 |
| <b>City</b>              |                     |                |                            |
| <b>Phone #</b>           | <b>619-222-6363</b> | <b>Fax</b>     |                            |
| <b>Emergency Number</b>  |                     |                |                            |
| <b>Radio Frequencies</b> |                     |                |                            |
| <b>Resources</b>         |                     | <b>Section</b> | <b>Volunteer Organiza-</b> |
| <b>tions</b>             | <b>Area/Zone</b>    | <b>1</b>       |                            |

|                          |                         |              |           |                |                            |
|--------------------------|-------------------------|--------------|-----------|----------------|----------------------------|
| <b>Address</b>           | <b>730 Pol k Street</b> | <b>State</b> | <b>CA</b> | <b>Zip</b>     | <b>94109</b>               |
| <b>City</b>              | <b>San Francisco</b>    |              |           |                |                            |
| <b>Phone #</b>           | <b>415-776-2211</b>     | <b>Fax</b>   |           |                |                            |
| <b>Emergency Number</b>  |                         |              |           |                |                            |
| <b>Radio Frequencies</b> |                         |              |           |                |                            |
| <b>Resources</b>         |                         |              |           | <b>Section</b> | <b>Volunteer Organiza-</b> |
| <b>tions</b>             | <b>Area/Zone</b>        |              |           | <b>1</b>       |                            |

**Organization**    **Sierra Club - Bay Chapter**

**Address**    **6014 College Ave.**

**City**        **Oakland**

**State**   **CA**

**Zip**       **94618**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions**      **Area/Zone**

**2**

---

**Organization**    **Sierra Club of California**

**Address**    **923 12th #200**

**City**        **Sacramento**

**State**   **CA**

**Zip**       **95814**

**Phone #**    **916-557-1100**

**Fax**       **916-557-9669**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions**      **Area/Zone**

**1**

---

**Organization**    **Sonoma Wildlife Rehabilitation - Cotati**

**Address**

**City**

**State**

**Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Volunteer Organiza-**

**tions**      **Area/Zone**

**1**

**Organization**     **Steinhart Aquarium**

**Address**     **Golden Gate Park**

**City**     **San Francisco**

**State**     **CA**

**Zip**     **94118**

**Phone #**     **415-750-7250**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**     **Area/Zone**

**Section**

**1**

**Volunteer Organiza-**

---

**Organization**     **Sulfer Creek Nature Center - Hayward**

**Address**

**City**

**State**

**Zip**

**Phone #**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**     **Area/Zone**

**Section**

**2**

**Volunteer Organiza-**

---

**Organization**     **The Lindsay Museum**

**Address**     **1901 First Ave.**

**City**     **Walnut Creek**

**State**     **CA**

**Zip**     **94596**

**Phone #**     **510-935-1988**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**tions**     **Area/Zone**

**Section**

**2**

**Volunteer Organiza-**

|                          |                     |              |           |            |              |
|--------------------------|---------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>428 J Street</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>   | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>95814</b> |
| <b>Phone #</b>           | <b>916-477-9379</b> | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                     |              |           |            |              |
| <b>Radio Frequencies</b> |                     |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

## Organization      The Nature Conservancy

|                          |                                     |              |           |            |              |
|--------------------------|-------------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>785 Market Street, 3rd Floor</b> |              |           |            |              |
| <b>City</b>              | <b>San Francisco</b>                | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94103</b> |
| <b>Phone #</b>           | <b>415-777-0487</b>                 | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                     |              |           |            |              |
| <b>Radio Frequencies</b> |                                     |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 2       | tions               |

## Organization      Trust for Public Lands

|                          |                                |              |           |            |              |
|--------------------------|--------------------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>926 J Street, Suite 612</b> |              |           |            |              |
| <b>City</b>              | <b>Sacramento</b>              | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>98514</b> |
| <b>Phone #</b>           | <b>916-557-1673</b>            | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                                |              |           |            |              |
| <b>Radio Frequencies</b> |                                |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |



|                          |                     |              |                     |            |              |
|--------------------------|---------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>P.O. Box 524</b> |              |                     |            |              |
| <b>City</b>              | <b>Newark</b>       | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94560</b> |
| <b>Phone #</b>           | <b>510-792-0222</b> | <b>Fax</b>   | <b>510-792-5828</b> |            |              |
| <b>Emergency Number</b>  |                     |              |                     |            |              |
| <b>Radio Frequencies</b> |                     |              |                     |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization**      **Volunteer Center of Marin**

|                          |                           |              |                     |            |              |
|--------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>70 Skyview Terrace</b> |              |                     |            |              |
| <b>City</b>              | <b>San Rafael</b>         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94903</b> |
| <b>Phone #</b>           | <b>415-499-7237</b>       | <b>Fax</b>   | <b>415-479-9722</b> |            |              |
| <b>Emergency Number</b>  |                           |              |                     |            |              |
| <b>Radio Frequencies</b> |                           |              |                     |            |              |

|                                |                                  |
|--------------------------------|----------------------------------|
| <b>Resources</b>               | <b>Alternate #: 415-499-5660</b> |
| <b>Volunteer Organizations</b> | <b>Section Area/Zone 1</b>       |

**Organization** Volunteer Center of Sonoma County

|                          |                           |              |                     |            |              |
|--------------------------|---------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>1041 Fourth Street</b> |              |                     |            |              |
| <b>City</b>              | <b>Santa Rosa</b>         | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>95404</b> |
| <b>Phone #</b>           | <b>707-527-2121</b>       | <b>Fax</b>   | <b>707-573-3380</b> |            |              |
| <b>Emergency Number</b>  |                           |              |                     |            |              |
| <b>Radio Frequencies</b> |                           |              |                     |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |

## Address

**City**      **Palo Alto**                                  **State**    **CA**                                  **Zip**

**Phone #** **Fax**

## Emergency Number

## Radio Frequencies

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

**Organization**      **Youth Science Institute - San Jose**

## Address

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

**Phone #** **Fax**

## Emergency Number

## Radio Frequencies

| Resources          | Section | Natural Resource |
|--------------------|---------|------------------|
| Trustees Area/Zone | 3       |                  |

**Organization** Ca. Dept. of F&G, Oil Spill Prev. & Response

**Address** P.O. Box 944209

City Sacramento State CA Zip 94244-2090

**Phone # 800-852-7550 Fax**

## Emergency Number

## Radio Frequencies

**Resources** **24 Hours Dispatch: 916-445-**  
**0045Section** **Natural Resource Trustees Area/**  
**Zone 1**

**Organization** Ca. Dept. of Parks & Recreation, Bay Area District

**Address** 95 Kelly Ave.

**City** Half Moon Bay

**State** CA

**Zip** 94109

**Phone #** 415-726-8800

**Fax** 415-726-0668

**Emergency Number**

**Radio Frequencies**

**Resources**

**Alternate #: 415-649-2810**

**Natural Resource Trustees**

**Area/Zone 2**

---

**Organization** California Coastal Commission

**Address** 45 Fremont Street, Suite 2000

**City** San Francisco

**State** CA

**Zip** 94105-2219

**Phone #** 415-904-5240

**Fax** 415-904-5200

**Emergency Number**

**Radio Frequencies**

**Resources**

**Section**

**Natural Resource**

**Trustees Area/Zone**

**2**

---

**Organization** California State Lands Commission, Marine

**Address** 200 Maritime Academy Drive

**City** Vallejo

**State** CA

**Zip** 94590

**Phone #** 707-649-4732

**Fax** 707-649-4745

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 800-852-7550**

**Natural Resource Trustees**

**Area/Zone 1**

---

**Organization**     **Department of Agriculture (U.S. Forest Service)**

**Address**   **630 Sansome Street**  
**City**       **San Francisco**                      **State**   **CA**                      **Zip**     **94111**

**Phone #**   **415-705-2818**                      **Fax**     **415-705-2836**  
**Emergency Number**  
**Radio Frequencies**

**Resources**                                              **Section**                      **Natural Resource**  
**Trustees**   **Area/Zone**                                              **1**

---

**Organization**     **Department of Defense, Commander 6th U.S. Army**

**Address**   **AFTC-OP Presidiio**  
**City**       **San Francisco**                      **State**   **CA**                      **Zip**     **94129-7000**

**Phone #**   **415-561-5671**                      **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources**                                              **OPCEN: 415-561-5671** **Section**  
**Natural Resource Trustees**                                              **Area/Zone**     **1**

---

**Organization**     **Department of Defense, U.S. Navy/Marine Corps.**

**Address**   **220 Pacific Highway**  
**City**       **San Diego**                      **State**   **CA**                      **Zip**     **92132-5181**

**Phone #**   **619-532-2454**                      **Fax**  
**Emergency Number**  
**Radio Frequencies**

**Resources**                                              **Alternate #: 619-532-1828**  
**AOOD: 619-532-2631/ 1828/ 1827** **Section**                      **Volunteer Organizations** **Area/Zone**  
**1**

---

|                          |                      |              |           |            |              |
|--------------------------|----------------------|--------------|-----------|------------|--------------|
| <b>Address</b>           | <b>1333 Broadway</b> |              |           |            |              |
| <b>City</b>              | <b>Oakland</b>       | <b>State</b> | <b>CA</b> | <b>Zip</b> | <b>94612</b> |
| <b>Phone #</b>           | <b>510-273-4237</b>  | <b>Fax</b>   |           |            |              |
| <b>Emergency Number</b>  |                      |              |           |            |              |
| <b>Radio Frequencies</b> |                      |              |           |            |              |

| Resources | Section | Volunteer Organiza- |
|-----------|---------|---------------------|
| tions     | 1       | tions               |
| Area/Zone |         |                     |

|                          |                                |              |                     |            |              |
|--------------------------|--------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>600 Harrison, Suite 515</b> |              |                     |            |              |
| <b>City</b>              | <b>San Francisco</b>           | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94107</b> |
| <b>Phone #</b>           | <b>415-431-4884</b>            | <b>Fax</b>   | <b>415-744-4121</b> |            |              |
| <b>Emergency Number</b>  |                                |              |                     |            |              |
| <b>Radio Frequencies</b> |                                |              |                     |            |              |

**Resources** Alternate #: 415-744-4090  
**Volunteer Organizations** Section Area/Zone 1

|                          |                                             |              |                     |            |              |
|--------------------------|---------------------------------------------|--------------|---------------------|------------|--------------|
| <b>Address</b>           | <b>2950 Peralta Oaks Ct., P.O. Box 5381</b> |              |                     |            |              |
| <b>City</b>              | <b>Oakland</b>                              | <b>State</b> | <b>CA</b>           | <b>Zip</b> | <b>94619</b> |
| <b>Phone #</b>           | <b>510-635-0135</b>                         | <b>Fax</b>   | <b>510-569-4319</b> |            |              |
| <b>Emergency Number</b>  |                                             |              |                     |            |              |
| <b>Radio Frequencies</b> |                                             |              |                     |            |              |

**Resources** Alternate #: 510-881-4884Section  
**Natural Resource Trustees** Area/Zone 1

**Organization**     **Golden Gate National Recreation Area**

**Address**     **Fort Mason, Building 201**

**City**     **San Francisco**     **State**     **CA**     **Zip**     **94123**

**Phone #**     **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**     **Oil Spill D. Hatch: 415-331-0744,**  
**415-556-4283**

**U.S. Park Place: 415-556-7968****Section**     **Natural Resource Trustees**     **Area/**  
**Zone**     **1**

---

**Organization**     **Gulf of Farallones Marine Sanctuary - NOAA**

**Address**     **GGNRA, Fort Mason, Bldg. 201**

**City**     **San Francisco**     **State**     **CA**     **Zip**     **94123**

**Phone #**     **415-556-3509**     **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**     **Section**     **Natural Resource**  
**Trustees**     **Area/Zone**     **2**

---

**Organization**     **Mare Island Naval Shipyard LEPC Repcode**

**Address**     **Mail Stop 56**

**City**     **Vallejo**     **State**     **CA**     **Zip**     **94592**

**Phone #**     **707-646-2157**     **Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**     **Section**     **Natural Resource**  
**Trustees**     **Area/Zone**     **1**

---



**Organization**    **Naval COMNAVBASE San Francisco, Regional (NO3)**

**Address**    **Bldg. 1, Treasure Island**

**City**        **San Francisco**

**State**   **CA**

**Zip**        **94130-0411**

**Phone #**    **415-395-3915**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**Secretary: 415-395-3920**

**Alternate #: 415-395-3918**

**Natural Resource Trustees    Area/**

**Zone**        **1**

---

**Organization**    **Pt. Reyes National Seashore**

**Address**

**City**        **Pt. Reyes**

**State**   **CA**

**Zip**        **94956**

**Phone #**    **415-663-8525**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 415-556-7968 Park**

**PoliceSection**

**Natural Resource Trustees    Area/**

**Zone**        **1**

---

**Organization**    **U.S. Army Corps of Engineers/ Emergency Preparedness**

**Address**    **211 Main Street, Room 801C**

**City**        **San Francisco**

**State**   **CA**

**Zip**        **94105-1905**

**Phone #**    **415-744-3404**

**Fax**

**Emergency Number**

**Radio Frequencies**

**Resources**

**24 Hours: 415-744-3403**

**Alternate #: 415-744-3033/3021/**

**3035/0334, 510-547-3403**

**Natural Resource Trustees    Area/**

**Zone**        **3**

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## **ANNEX F SUMMARY OF AREA RESOURCES**

### **APPENDIX III PERSONNEL AND INFORMATION RESOURCES**

#### **TAB A COAST GUARD MSO SAN FRANCISCO PERSONNEL**

Marine Safety Office San Francisco Bay (MSO SFB) is located in Building 14 on Coast Guard Island, Alameda (24 hour phone number: (510) 437-3073). MSO SFB has a Marine Safety Detachment (MSD) in Concord. The total active duty and reserve personnel resources are 63 officers and 129 enlisted. In the event of a large oil spill, personnel resources will be assigned, based on need, to the Unified Command System.

This section reports MSO SFB active duty and reserve officer and enlisted personnel allowances and identifies the Unified Command positions these personnel would fill in the event of a large oil spill. Several key UCS positions are pre-designated to be filled by appropriate active duty MSO SFB personnel. The source document for the assignment of all MSO SFB personnel is the unit's Watch, Quarter and Station Bill. The magnitude of the spill will determine the extent to which the various MSO SFB personnel will be assigned to the Unified Command. In the event of a worst case or Spill of National Significance (SONS), it is anticipated that all MSO SFB personnel will initially be assigned to the Unified Command until reservists and other Coast Guard resources are mobilized.

In the event of a large spill, the need to mobilize personnel rapidly will be important to the execution of an effective response. Personnel resources will be utilized/requested in the following order:

1. MSO SFB Personnel
2. MSO SFB Reserve Personnel
3. Other Local Active Duty Resources
4. Other Local Reserve Resources
5. Active Duty Resources Within Coast Guard District 11
6. Other Reserve & Active Duty Resources Outside District 11

The preference is to use local personnel to the maximum extent possible. Current procedures to involuntarily activate reservists requires a Secretary of Transportation order and would likely take days or weeks. Therefore, it is assumed that reservists will be mobilized most rapidly on a voluntary basis utilizing the District Commander's authority to order not more than 10 officers and 100 enlisted ready reservists in one district for not more than 30 days (COMDTINST M1001.27A). Since these active duty orders are voluntary, the exact number of reservists available for active duty is impossible to predict. Additional reservists could be activated utilizing ADT or TEMAC orders. For immediate needs (during the first 1-2 days) local Coast Guard Island personnel will be requested to assist.

## **ANNEX F SUMMARY OF AREA RESOURCES**

### **APPENDIX IV SPECIAL FORCES**

#### **TAB A USCG NSF**

The National Strike Force (NSF) was created in 1973 as a Coast Guard staffed “Special Force.” This special force assists On-Scene Coordinators (OSCs) responding to potential and actual oil and hazardous material spills as directed by the National Contingency Plan (NCP).

The National Strike Force is composed of four units including three, 35 member Strike Teams. These teams are: the Atlantic Strike Team located in Fort Dix, NJ (609)724-0008; the Gulf Strike Team located in Mobile, AL (205)639-6601; and the Pacific Strike Team located in Novato, CA (415)883-3311. The Strike Teams are managed by a fourth unit, the National Strike Force Coordination Center which is located in Elizabeth City, NC (919)331-6000.

NSF Mission: The NSF is a unique, highly trained cadre of Coast Guard professionals who maintain and rapidly deploy with specialized equipment in support of Federal On-Scene Coordinators preparing for and responding to oil and chemical incidents in order to prevent adverse impact to the public and reduce environmental damage.

NSF Capabilities include:

- Responding with trained personnel and specialized equipment to prevent, contain and/or remove spills of oil and releases of hazardous materials;
- Providing spill management expertise;
- Assisting with response planning and consultation;
- Conducting operational training in oil and chemical spill response techniques and equipment usage;
- Coordinating, conducting, and evaluating the national Preparedness for Response Exercise Program (PREP);
- Identifying, locating, and assisting in the transportation of specialized equipment needed for spill response; and
- Providing support from the Public Information Assist Team (PIAT) to OSCs during pollution responses.

The NSF can provide OSCs with expertise in many areas, including:

- Operating spill response equipment;

- Supervising/monitoring response personnel on sites;
- Outlining, establishing, monitoring site safety requirements during the conduct of hazardous material spill/release operations.
- Providing resource and photographic documentation support;
- Providing command, control, and communications support;

The National Strike Force equipment inventory includes:

- Lightering and transfer systems - including pumping equipment capable of handling all oils, corrosives and other chemical cargoes;
- Containment barriers and skimming systems; Open Water Oil Containment and Recovery System (OWOCS) and Vessel of Opportunity Skimming System (VOSS);
- Offshore inflatable containment boom;
- Temporary storage devices for oil and hazardous materials;
- Mobile command posts and communications equipment;
- Generators, light towers, air compressors;
- Air monitoring equipment;
- Levels A, B, and C HAZMAT response entry capabilities;
- Trailerable and inflatable boats to support deployment of equipment and provide logistics;
- Photographic and video documentation equipment.

**Requests for Strike Team Assistance:** As outlined in the NCP, “The OSC may request assistance directly from the Strike Teams. Requests for a team may be made to the Commanding Officer of the appropriate team, the USCG member of the RRT, or the Commandant of the USCG through the NRC.” OSC’s are encouraged to use the NSF whenever its expertise or equipment is needed, or to augment the OSC’s staff when it is overburdened by a response to a given incident. The NSF should be used when:

- A medium or major discharge or potential discharge occurs;
- Control of the discharge requires the special knowledge or special equipment of the NSF;
- Response will require in excess of two days to complete removal operations and augmentation by NSF personnel will release local forces to return to normal operations; or

-In the judgement of the OSC, NSF capabilities are necessary;

Upon receiving a request, personnel and equipment will be deployed to the scene in the most expeditious manner possible. This may involve over-the-road transport: all three Strike Teams have tractor-trailer rigs which give them rapid deployment capabilities. In the event air transport of equipment is required, aircraft support will be coordinated by the appropriate Area Commander.

By requesting assistance from any one Strike Team, an OSC immediately gains access to the entire National Strike Force personnel roster and equipment inventory. Each team maintains a state of readiness which enables them to dispatch two members immediately, four members within two hours, and up to twelve members within six hours as the circumstances of the incident dictate. Equipment would be dispatched within four hours of a request for assistance.

NOTE: Since response support is time critical, early notification of Strike Team assistance (or potential assistance) will allow the teams to begin logistics planning even before a formal request is made.

Logistic Considerations: Strike Teams make every effort to be as logistically independent, however, assistance may be required from the OSC in arranging the following support:

- Heavy lifting equipment, such as cranes and forklifts capable of handling a 16,000 lbs containment barrier box;
- Fork extensions for forklift;
- Small boats, vessels of opportunity;
- Tractor-trailer rigs;
- Electrical power, land lines for telephones and computers, potable water supply and fuel supply for command posts.

Specific logistic needs will be clarified during the initial request for assistance; these needs vary, dependent upon the incident and location. Strike Teams attempt to minimize the effort by the OSC's staff required to arrange support. However, the local knowledge of the OSC's staff may be relied upon by the Strike Teams to make reasonable decisions regarding logistics.

#### **TAB B PIAT**

The Public Information Assist Team (PIAT) is an element of the NSFCC staff which is available to assist OSCs to meet the demands for public information during a response or exercise. Its use is encouraged any time the OSC requires outside public affairs support. Requests for PIAT assistance may be made through the NSFCC or NRC.

#### **TAB C USCG DRG AND DRAT**

The District Response Group (DRG) is a framework within each Coast Guard district to organize district resources and assets to support USCG OSCs during response to a pollution incident. Coast Guard DRGs

assist the OSC by providing technical assistance, personnel, and equipment, including the Coast Guard's prepositioned equipment. Each DRG consists of all Coast Guard personnel and equipment, including fire fighting equipment, in its district, additional prepositioned equipment, and a District Response Advisory Team (DRAT) that is available to provide support to the OSC in the event that a spill exceeds local response capabilities.

#### **TAB D U.S. NAVY**

The U.S. Navy (USN) is the Federal agency most knowledgeable and experienced in ship salvage, shipboard damage control, and diving. The USN has an extensive array of specialized equipment and personnel available for use in these areas as well as specialized containment, collection, and removal equipment specifically designed for salvage related and open sea pollution incidents.

The Supervisor of Salvage (SUPSALV) can provide salvage expertise and maintains a warehouse on each coast stockpiled with salvage and response gear. (See Annex F, Appendix I for a listing of SUPSALV equipment.)

In order to access (SUPSALV) equipment the following actions must be taken:

There must be a significant spill.

The DRAT must request that the RRT be activated in order for the COTP to request (SUPSALV) equipment or notify the RRT that we have already solicited (SUPSALV) for their equipment.

The COTP must contact the Pollution Manager at NAVSEA in Arlington, Virginia at (703)607-2758.

The COTP must then contact SUPSALV in Stockton, California at (209)944-0536.

Individual Navy Facilities also locally stockpile some response equipment, which is also listed in Annex F, Appendix I. This equipment may be accessed by contacting the local Navy On-Scene Coordinator (NOSC) at (415)395-4073.

# Annex G

|              |                                                          |    |
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## **ANNEX G CHEMICAL COUNTERMEASURES**

### **APPENDIX I DISPERSANTS**

#### **BACKGROUND**

The use of chemical dispersants to assist in the control of oil spills at sea has been under intense study since the late 1960's and early 1970's. At that time, there were several instances of indiscriminate use of highly toxic chemical agents in attempts to disperse spilled oil. Since then, products lacking hydrocarbon solvents have been developed that are water-based or water-soluble and generally are less toxic. In some instances, these products have been intensely studied, registered on the National Contingency Plan (NCP) Product Schedule, and licensed by the State Water Resources Control Board (SWRCB) for use in California waters. The effectiveness of dispersants is still a hotly debated topic; methods to evaluate dispersant efficacy remain contentious as do the laboratory results on dispersant effectiveness. The use of dispersants in specific situations, however, may afford an appropriate environmental trade-off when compared to their non-use.

#### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea conditions, and spill magnitude. Use of chemical oil spill cleanup agents may be considered when the preferred recovery techniques are inadequate and the environmental benefit of chemical use outweighs its adverse effects.

#### **GUIDELINES**

The NCP, Section 300.910, authorizes the use of dispersants on all waters threatened by the release or discharge of oil. The following guidelines consolidate existing Federal and State policies and streamline the approval process without jeopardizing the proper environmental considerations of dispersant and other chemical use.

##### **(A) Decision Process**

The OSC shall adhere to the following:

##### **(1) Areas:**

##### **(a) Zone 1**

Shoreward of the baseline from which the territorial sea is measured: The OSC will obtain approval from the EPA representative to the RRT and the affected state(s) (California, Nevada, and/or Arizona). Whenever fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the natural resource trustee(s).

##### **(b) Zone 2**

Seaward of the baseline to 3 nautical miles: Coast Guard OSC will obtain approval from the EPA representative to the RRT and the California Department of Fish and



Game (CDFG) representing the State of California. Whenever fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the DOI and DOC natural resource Trustees, including Sanctuary Managers as applicable.

(c) Zone 3

Beyond 3 miles: Coast Guard OSC will obtain approval from the EPA representative to the RRT. Concurrence with the CDFG, representing the State of California is necessary when navigable waters under the jurisdiction of the State of California may be threatened by the release or discharge. In all cases, the State of California will be notified and consulted prior to the use of dispersants. Whenever significant fish or wildlife resources may be affected, the EPA and State representative to the RRT will consult with the DOC and DOI natural resource trustees, including Sanctuary Managers as applicable.

- (2) Documentation/Technical Assistance: EPA, affected state(s), DOI, and DOC will each have a representative available to coordinate data collection and interpretation and to consult with the OSC.
- (3) Authorized Dispersants and Chemicals: Only dispersants and chemical accepted by the EPA and the CDFG representing the State of California shall be used, except in Zone 3 where the EPA accepted list is preeminent. The application and use of Oil Spill Cleanup Agents in California shall comply with Article Three (Sections 2332 through 2336) of California Code of Regulation, Title 23.
- (4) Monitoring: The application process and results must be recorded visually. This can be accomplished using film or video footage made from a vessel or from the air. Visual observations can also be made by a trained observer. However, it is often difficult even for a trained observer to distinguish between oil dispersion and oil herding. If possible, localized monitoring should be undertaken to determine the effectiveness of dispersion into the water (e.g., measurement of oil/dispersant mixtures into the water column). Efforts should be made to distinguish between effective dispersion and simple herding of oil. Filming should be done without causing delay to the dispersant application activity.
- (5) Hazard to Human life: The safety of human life is paramount to other considerations. The OSC (or, for spills originating from and within 500 meters of an offshore platform, the designated representative from the Minerals Management Service on the OSC's staff) may authorize the use of any dispersant, anywhere, and at any time when necessary to prevent or substantially reduce hazards to human life. The OSC is to inform the EPA RRT representative and, as appropriate, the RRT representatives from the affected state(s) and, when practicable, the DOC/DOI natural resource trustees of the use of a product as soon as possible.
- (6) Hazard to the Environment: Dispersants should not be used unless they can be used effectively and efficiently with an articulable justification that the environmental impact of the spill will be lessened by their use.

(B) Documentation

The Dispersant Checklist (Figure G-I-1) will be used by the OSC and staff to permanently record the decision to use or not to use dispersants for a specific incident. The SSC will assemble this information, with input from resource agencies and other sources. A single checklist will be given to the OSC to assist in the evaluation of the dispersibility of the oil, the potential effects on the wildlife habitat and resources, and the degree of mitigation using dispersants versus mechanical removal. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.

#### QUICK APPROVAL ZONE (QAZ) PLAN

The QAZ Plan: The 11th Coast Guard District and Region IX of the EPA along with the State of California and the other members of the Regional Response Team have instituted the QAZ Plan. This plan details the procedures that the On Scene Coordinator (OSC) would employ in order to receive an expeditious dispersant decision. Generally speaking the QAZ is defined as the offshore waters of California that are at a safe distance from environmentally sensitive areas. The QAZ is based on the concept that the pelagic environment may be relatively less sensitive to the application of chemical dispersants while at the same time an oil slick, far offshore, could still potentially threaten susceptible nearshore habits (e.g. marine sanctuaries, wetlands, etc.). A timely response to an offshore threat could prove very beneficial in the long term. Copies of this plan can be gotten from the 11th Coast Guard District or OSPR. This accelerated review process has been instituted so that Coast Guard OSC's can mobilize dispersant resources in a timely fashion. Spills in the offshore environment may require a greater amount of logistical support due to their distance from staging areas. Longer flights to the slick constitute greater fuel requirements, resulting in a smaller dispersant payload that can be transported, which may lead to greater number of sorties and/or more aircraft.

#### DISPERSANT CHECKLIST

##### **BASIC DISPERSANT CONSIDERATIONS**

- o viscosity less than 2000 cs (**Yes or No**)
- o pour point less than water temperature (**Yes or No**)
- o adequate energy present in the sea surface (**Yes or No**)
- o depth of water greater than 200 feet (**Yes or No**)
- o more than 2 hours drift away from sanctuary (**Yes or No**)

**SPILL DATA/INCIDENT INFORMATION**

CAUSE (SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_  
\_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_  
\_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

**CHARACTERISTICS OF SPILLED OIL**

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

**DISPERSANT CHECKLIST, PAGE 2.WEATHER AND WATER CONDITIONS/FORECAST (48HR)**

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

**OIL TRAJECTORY INFORMATION (48HR)**

SURFACE AREA OF SLICK: \_\_\_\_\_

24HR SLICK TRAJECTORY: \_\_\_\_\_

48HR SLICK TRAJECTORY: \_\_\_\_\_

24HR DISPERSED OIL TRAJECTORY: \_\_\_\_\_

48HR DISPERSED OIL TRAJECTORY: \_\_\_\_\_

EXPECTED LANDFALL (LOCATION/TIME): \_\_\_\_\_

COMMENTS: \_\_\_\_\_

HABITAT TYPE/AREA OF IMPACT:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

**DISPERSANT CHARACTERISTICS**

|  | PRODUCT 1 | PRODUCT 2 | PRODUCT 3 |
|--|-----------|-----------|-----------|
|--|-----------|-----------|-----------|

|       |       |       |       |
|-------|-------|-------|-------|
| NAME: | _____ | _____ | _____ |
|-------|-------|-------|-------|

|               |       |       |       |
|---------------|-------|-------|-------|
| MANUFACTURER: | _____ | _____ | _____ |
|---------------|-------|-------|-------|

|             |       |       |       |
|-------------|-------|-------|-------|
| EPA LISTED: | _____ | _____ | _____ |
|-------------|-------|-------|-------|

|                 |       |       |       |
|-----------------|-------|-------|-------|
| STATE LICENSED: | _____ | _____ | _____ |
|-----------------|-------|-------|-------|

|                     |       |       |       |
|---------------------|-------|-------|-------|
| STOCKPILE LOCATION: | _____ | _____ | _____ |
|---------------------|-------|-------|-------|

|                         |       |       |       |
|-------------------------|-------|-------|-------|
| POINT OF CONTACT        | _____ | _____ | _____ |
| WHEN AVAILABLE:         | _____ | _____ | _____ |
| AMOUNT AVAILABLE        | _____ | _____ | _____ |
| AMOUNT NEEDED           | _____ | _____ | _____ |
| AMOUNT ON HAND          | _____ | _____ | _____ |
| TOXICITY:               | _____ | _____ | _____ |
| TYPE (CONCENTRATE/MIX)  | _____ | _____ | _____ |
| PHYSICAL REACTIVITY:    | _____ | _____ | _____ |
| APPLICABILITY ON OIL    | _____ | _____ | _____ |
| EFFICIENCY(% PROJECTED) | _____ | _____ | _____ |
| APPLICATION MEANS:      | _____ | _____ | _____ |
| POSITIVE DOSAGE CONTROL | _____ | _____ | _____ |
| DOSAGE RATE SETTINGS    | _____ | _____ | _____ |
| DOSAGE CHARTS AVAILABLE | _____ | _____ | _____ |

**DISPERSANT APPLICATION INFORMATION/EVALUATION:**

PROPOSED DISPERSANT APPLICATION PLAN: \_\_\_\_\_  
 \_\_\_\_\_

**DISPERSANT APPLICATION INFORMATION (CONTINUED)**

EQUIPMENT PROPOSED FOR USE: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ARE RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_  
 \_\_\_\_\_

SCHEDULE OF DISPERSANT OPERATIONS: \_\_\_\_\_  
 \_\_\_\_\_

WHAT WILL THE SLICK/WEATHER CONDITIONS BE AT THE TIME THE DISPERSANT IS

APPLIED: \_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS  
STATED ABOVE: \_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**WITNESSES TO APPLICATION**

NAMES

DATE/TIME

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PLATFORM USED: \_\_\_\_\_

\_\_\_\_\_

OBSERVATION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S)NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_

**BIOREMEDIATION CHECKLIST**

**SPILL DATA/INCIDENT INFORMATION**

CAUSE (SPECIFIC): \_\_\_\_\_

\_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_

\_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

### **CHARACTERISTICS OF SPILLED OIL**

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

### **WEATHER AND WATER CONDITIONS/FORECAST (48HR)**

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_

### **BIOREMEDIATION CHECKLIST, PAGE 2.**

HABITAT TYPE/AREA OF IMPACT:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

### **BIOREMEDIATION CHARACTERISTICS**

|                         | PRODUCT 1 | PRODUCT 2 | PRODUCT 3 |
|-------------------------|-----------|-----------|-----------|
| NAME:                   | _____     | _____     | _____     |
| MANUFACTURER:           | _____     | _____     | _____     |
| EPA LISTED:             | _____     | _____     | _____     |
| STATE LICENSED:         | _____     | _____     | _____     |
| STOCKPILE LOCATION:     | _____     | _____     | _____     |
| POINT OF CONTACT        | _____     | _____     | _____     |
| WHEN AVAILABLE:         | _____     | _____     | _____     |
| AMOUNT AVAILABLE        | _____     | _____     | _____     |
| AMOUNT NEEDED           | _____     | _____     | _____     |
| AMOUNT ON HAND          | _____     | _____     | _____     |
| TOXICITY:               | _____     | _____     | _____     |
| TYPE (CONCENTRATE/MIX)  | _____     | _____     | _____     |
| PHYSICAL REACTIVITY:    | _____     | _____     | _____     |
| APPLICABILITY ON OIL    | _____     | _____     | _____     |
| EFFICIENCY(% PROJECTED) | _____     | _____     | _____     |
| APPLICATION MEANS:      | _____     | _____     | _____     |
| POSITIVE DOSAGE CONTROL | _____     | _____     | _____     |
| DOSAGE RATE SETTINGS    | _____     | _____     | _____     |
| DOSAGE CHARTS AVAILABLE | _____     | _____     | _____     |



**BIOREMEDIATION APPLICATION INFORMATION/EVALUATION:**

PROPOSED BIOREMEDIATION APPLICATION PLAN: \_\_\_\_\_  
\_\_\_\_\_

EQUIPMENT PROPOSED FOR USE: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_  
\_\_\_\_\_

SCHEDULE OF BIOREMEDIATION OPERATIONS: \_\_\_\_\_  
\_\_\_\_\_

WHAT WILL THE WEATHER CONDITIONS BE AT THE TIME THE BIOREMEDIATION IS  
APPLIED: \_\_\_\_\_  
\_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS  
STATED ABOVE: \_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**WITNESSES TO THE APPLICATION**

| NAMES | DATE/TIME |
|-------|-----------|
| _____ | _____     |
| _____ | _____     |
| _____ | _____     |
| _____ | _____     |
| _____ | _____     |

PLATFORM USED: \_\_\_\_\_  
\_\_\_\_\_

OBSERVATION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S)NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_

**IN-SITU BURNING CHECKLIST**

**SPILL DATA/INCIDENT INFORMATION**

CAUSE (SPECIFIC): \_\_\_\_\_  
\_\_\_\_\_

DATE/TIME: \_\_\_\_\_

LOCATION: \_\_\_\_\_  
\_\_\_\_\_

VOLUME AND TYPE OF RELEASE (Cont., Intermittent): \_\_\_\_\_  
\_\_\_\_\_

POTENTIAL VOLUME TO BE RELEASED: \_\_\_\_\_  
\_\_\_\_\_

CONFIDENCE IN DATA (high, medium, low): \_\_\_\_\_

**CHARACTERISTICS OF SPILLED OIL**

OIL TYPE/NAME: \_\_\_\_\_

SPECIFIC GRAVITY: \_\_\_\_\_ FLASH POINT: \_\_\_\_\_

POUR POINT: \_\_\_\_\_ VISCOSITY: \_\_\_\_\_

%AROMATICS: \_\_\_\_\_ %SATURATES: \_\_\_\_\_

%ASPHALTENES: \_\_\_\_\_

**WEATHER AND WATER CONDITIONS/FORECAST (48HR)**

WATER TEMP: \_\_\_\_\_ AIR TEMP: \_\_\_\_\_

CURRENT INFO: \_\_\_\_\_ WIND SPEED: \_\_\_\_\_

SALINITY: \_\_\_\_\_ WIND DIRECTION: \_\_\_\_\_

WATER DEPTH: \_\_\_\_\_ SEA STATE: \_\_\_\_\_

TIDE INFO: \_\_\_\_\_

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

**IN-SITU BURNING CHECKLIST, PAGE 2.**

HABITAT TYPE/AREA OF IMPACT:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**IN-SITU BURNING INFORMATION/EVALUATION:**

PROPOSED IN-SITU BURNING OPERATION PLAN: \_\_\_\_\_

\_\_\_\_\_

EQUIPMENT/METHOD PROPOSED FOR USE: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

RESPONDERS ADEQUATELY TRAINED: \_\_\_\_\_

LOCATION OF AREA TO BE TREATED: \_\_\_\_\_

\_\_\_\_\_

SCHEDULE OF IN-SITU BURNING OPERATIONS: \_\_\_\_\_

\_\_\_\_\_

WHAT WILL THE WEATHER CONDITIONS BE AT THE TIME THE IN-SITU BURNING  
OPERATION IS APPLIED: \_\_\_\_\_

\_\_\_\_\_

IS THE VEHICLE FOR APPLICATION EFFICIENT AND PROPER GIVEN THE CONDITIONS  
STATED ABOVE: \_\_\_\_\_

ARE MONITORING SCHEMES IN PLACE OR READILY AVAILABLE: \_\_\_\_\_

**IN-SITU BURNING CHECKLIST, PAGE 3**

**WITNESSES TO THE APPLICATION**

NAMES

DATE/TIME

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PLATFORM USED: \_\_\_\_\_

\_\_\_\_\_

OBSERVATION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**VIDEO/PHOTO DOCUMENTATION RECORD**

IN CHARGE: \_\_\_\_\_ IN CUSTODY OF: \_\_\_\_\_

CASSETTE(S)NUMBER \_\_\_\_\_ VIDEO EQUIPMENT TYPE \_\_\_\_\_

ROLL(S) NUMBER \_\_\_\_\_ CAMERA TYPE \_\_\_\_\_

The following information has been provided by the State of California. It lists the companies and their products that have been licensed for use within the state. However, any product, licensed or not, must be approved for use on a case-by-case basis. The procedures to follow for requesting the use of any chemical countermeasures are contained in this Annex.

CALIFORNIA LICENSED OIL SPILL CLEANUP AGENTS: as of APRIL 1994

| <b><u>Company</u></b>                                                                    | <b><u>Name of Product<br/>and License<br/>Expiration Date</u></b> | <b><u>Type of Product</u></b> |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------|
| A.S.I.<br>855 W. Walnut Street<br>Compton, CA 90220                                      | SPC Oil Sorbent<br>5/1/98                                         | Collecting                    |
| Absorbent Systems, Inc.<br>508 East E Street<br>Wilmington, CA 90744                     | Valdez Pillow<br>2/1/97                                           | Collecting                    |
| Absorption Corporation<br>1051 Hilton Avenue<br>Bellingham, WA 98225                     | Absorbent W<br>4/1/98                                             | Collecting                    |
| Albert Gabrick<br>2118 Tree Ridge Circle<br>Brea, CA 92621                               | Alsocup<br>7/1/98                                                 | Collecting                    |
| Conwed Corporation<br>P.O. Box 357<br>Riverside, NJ 08075                                | Conwed Oil Sorbers<br>9/1/95                                      | Collecting                    |
| Dutch Pride Products<br>P.O. Box 1651<br>Cottonwood, AZ 86326                            | ECO/+<br>11/15/95                                                 | Dispersant                    |
| Exxon Chemical Company<br>821 Stedman Street<br>Houston, TX 77029                        | Corexit OC-5<br>9/1/95                                            | Collecting                    |
|                                                                                          | Corexit 7664<br>9/1/95                                            | Dispersant                    |
|                                                                                          | Corexit 9527<br>9/1/95                                            | Dispersant                    |
| General Technologies<br>Application, Inc.<br>7720 Mason King Court<br>Manassas, VA 22110 | Elastol<br>5/1/97                                                 | Collecting                    |

| <b><u>Company</u></b>                                                                     | <b><u>Name of Product<br/>and License<br/>Expiration Date</u></b> | <b><u>Type of Product</u></b> |
|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------------|
| HAZ-MAT Response<br>Technologies, Inc.<br>5891 Box Canyon Road<br>La Jolla, CA 92037      | Rubberizer<br>7/1/98                                              | Collecting                    |
| Marlen Supply, Inc.<br>23159 Kidder Street<br>Hayward, CA 94545                           | Nokomis #3 (F-4)<br>(AKA Improve Colloidals)<br>10/1/95           | Dispersant                    |
|                                                                                           | Slick-A-Way<br>10/1/95                                            | Dispersant                    |
| OSA, INC.<br>8291 S. Sepulveda Blvd.<br>#118<br>Los Angeles, CA 90054                     | OSA Oil Absorbent<br>2/1/99                                       | Collecting                    |
| Parker Systems, Inc.<br>P.O. Box 1652<br>Norfolk, VA 23501                                | Oil Snare<br>4/1/94                                               | Collecting                    |
| R.B.H. Cybernetics<br>(1970 Ltd.)<br>Postal Station A<br>Victoria, B.C. Canada<br>VX8 3X8 | Graboil<br>2/1/97                                                 | Collecting                    |
| Shell Oil Company<br>One Shell Plaza<br>P.O. Box 432D<br>Houston, TX 77210                | Shell Oil Herder<br>1/1/95                                        | Collecting                    |
| Zorbite Corporation<br>612 Meyer Lane #8<br>Redondo Beach, CA 90278                       | Zorbite<br>10/1/94                                                | Collecting                    |
| 3M Occupational Health<br>& Safety Products Div.<br>3M Center<br>St. Paul, MN 55144       | 3M Brand Oil Sorbent<br>1/1/95                                    | Collecting                    |

## ANNEX G CHEMICAL COUNTERMEASURES

### APPENDIX II BIOREMEDIATION

#### BACKGROUND

Bioremediation is a treatment technology that enhances existing biological processes to accelerate the decomposition of petroleum hydrocarbons and some hazardous wastes. Bioremediation has been used extensively in waste water treatment of spilled oil. The most extensive field research efforts have been the shoreline treatment studies in Alaska following the Valdez incident. This research suggested that shoreline treatment by nutrient enhancement significantly increased degradation rates of oil when compared to untreated shoreline areas. The benefits of bioremediation, however, have not been adequately demonstrated through field applications. Consequently, this technology should be considered more experimental than an accepted standard for cleanup of oil spills. The promise of bioremediation providing increased rates of oil degradation with minimal input of human effort to cleanup the spilled oil is attractive. However, the technology is time consuming, unproved in open water environments, and probably best suited to the treatment of specific types of shorelines and marsh habitats. At present, bioremediation should be viewed as a polishing agent for the final stages of cleanup rather than as a primary response tool - especially considering the slow rates of reaction to degrade the oil.

#### REGIONAL PHILOSOPHY

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea conditions, and spill magnitude. In addition, efforts and equipment used for mechanical recovery may prove to be more destructive to the environment than the original contamination with oil. Based on the results of current research, and a general understanding of the principles of bioremediation, this technology should be used strictly as a shoreline remediation tool with a preference for nutrient enhancement without the introduction of indigenous and/or nonindigenous microbes.

#### GUIDELINES

Section 300.910 of NCP authorizes the use of biological additives for the dispersion/abatement of oil spills. The product must be listed on the NCP Product Schedule and on the list of products licensed by the SWRCB for use in the State of California to be considered for use along the California coastline. The following guidelines consolidate existing Federal and State regulations and streamline the approval process.

##### (A) Decision Process

The OSC shall adhere to the following:

- (1) Inland and shoreline areas: The OSC will obtain approval from the EPA and the California Department of Fish and Game (CDFG) representing the State of California. The EPA and State representative to the RRT shall consult with the DOI and DOC natural resource trustee(s). **Note:** In California, bioremediation products considered for use must be on California's list of approved products, or be incident specific approved by the State representative to the RRT.

- (2) Documentation/Technical Assistance: EPA, affected states(s), DOI, and DOC will each have a representative available to coordinate data collection and interpretation and to consult with the OSC.
- (3) Monitoring: The application process and results must be recorded visually. This can be accomplished using film or video footage made from the shore or from the air. Visual observations can also be made by a trained observer. Filming should be done without causing delay to the bioremediation application activity.

(B) Documentation

The Bioremediation Checklist (Figure G-II-1) will be used by the OSC and staff to permanently record the decision to use or not to use bioremediation for a specific incident. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.



## **ANNEX G CHEMICAL COUNTERMEASURES**

### **APPENDIX III IN-SITU BURNING**

#### **BACKGROUND**

The burning of oil in its original location (in-situ burning) to assist in the abatement of oil spills is not a new or an unproven oil spill response technology. The development of fire retardant boom (fire boom) and oil ignition methods/devices used in the burning of oil have recently come into existence, making in-situ burning a viable response technology. As an example, an in-situ test burn was conducted on the second day of the Exxon Valdez incident. Using two fishing vessels and 500 feet of fire boom, an estimated 15,000 to 30,000 gallons of crude oil were eliminated in 75 minutes. Using the lower estimate of 15,000 gallons encountered, and with a residual 300 gallons of unburned material left inside the boomed containment area, 98% of the oil encountered was eliminated. Of all current oil spill abatement methods, only in-situ burning can achieve results like these and at a fraction of the cost of typical oil spill cleanup techniques.

#### **REGIONAL PHILOSOPHY**

The primary objective of oil spill abatement and cleanup is to reduce the effect of spilled oil on the environment. Physical removal and disposal is the preferred method. However, mechanical recovery may be limited by equipment capability, weather and sea states, storage and disposal problems, and spill magnitude. Use of in-situ burning may be considered by the OSC when the preferred recovery techniques are inadequate and in situ burning will lessen the environmental impacts of the spill.

#### **GUIDELINES**

The National Contingency Plan, Section 300.910, authorizes the OSC, with the concurrence of the EPA representative to the RRT and, as appropriate, the concurrence of the State representative to the RRT with jurisdiction over navigable waters threatened by the release or discharge (of oil), and in consultation with the DOC and DOI natural resource trustees, when practicable, to authorize the use of in-situ burning on a case-by-case basis. The following guidelines consolidate existing Federal and State regulations, for the approval process without jeopardizing the proper environmental considerations of in-situ burning:

##### **(A) Decision Process**

Currently, California does not allow the burning of oil within the State or on State waters. California Health and Safety Code, Article 2, Section 41800 states that, “no person shall use open outdoor fires for the purpose of disposal or burning of petroleum wastes...”

In-situ burning can be used in the state of California and its waters by Federal preemption of California Health and Safety Code, Article 2, Section 41800. Federal preemption is possible only under specific circumstances. When preemption occurs, the OSC must obtain approval from EPA and State representative to the RRT. When appropriate and practicable, the EPA and State representative to the RRT shall consult the DOC and DOI natural resource trustees.

The OSC shall adhere to the following when in-situ burning is considering outside State waters:

- (1) Beyond 3 miles: The OSC will obtain approval from the EPA representative to the RRT. Concurrence from the State of California is necessary only when navigable waters under

the jurisdiction of the State of California are threatened by the discharge of oil. In all cases, the State of California will be notified of the use of in-situ burning. When appropriate and practicable, the EPA representative to the RRT shall consult with the DOC and DOI natural resource trustees, and Sanctuary Managers, if applicable.

- (2) Monitoring: The use and results of in-situ burning must be recorded visually. This can be accomplished using film or video footage made from a vessel or the air. Visual observations can also be made by a trained observer. Filming should be done without causing delay to the in-situ burning operation.

#### (B) Documentation

The In-Situ Burning Checklist (Figure G-III-1) will be used by the OSC and staff to permanently record the decision to use or not to use in-situ burning for a specific incident. Each agency resource trustee representative will be the point of contact for their constituency; the SSC will be the point of contact for all not represented.

# Annex H

|                                          |   |
|------------------------------------------|---|
| APPENDIX I SITE SAFETY .....             | 2 |
| APPENDIX II RESPIRATORY PROTECTION ..... | 6 |
| APPENDIX III TRAINING REQUIREMENTS ..... | 6 |

## **ANNEX H HEALTH AND SAFETY**

- (a) 29 CFR 1910.120 HAZWOPER
- (b) 8 CCR 5192 HAZWOPER
- (c) OSHA CPL 2-2.51 Post Emergency Response Operations
- (d) CAL OSHA memo dtd 25 NOV 1992

### **APPLICABLE REGULATIONS.**

The regulations regarding Hazardous Waste Operations and Emergency Response (HAZWOPER), references (a) and (b), apply to: a) cleanup operations, required by a governmental body, involving hazardous substances, that are conducted at uncontrolled hazardous waste sites, and b) emergency response operations for releases of, or substantial threats of release of, hazardous substances without regard to the location of the hazard; unless the employer can demonstrate that the operation does not involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards. These regulations also define crude oil, fuel oils no. 1,2,4,5,6, aviation fuel, and gasoline as hazardous substances. An uncontrolled hazardous waste site is defined as, “an area identified as an uncontrolled hazardous waste site by a governmental body, whether Federal, state, local, or other, where an accumulation of hazardous substances creates a threat to the health and safety of the individuals or the environment or both.” OSHA considers an area impacted by an oil spill as an uncontrolled hazardous waste site.

Most oil spill emergency response and cleanup operations will fall within the scope of the HAZWOPER regulations. Any governmental agency or private employer involved in such operations, should comply with HAZWOPER regulations to the greatest extent possible as a matter of pre-planning, in order that a response to an actual situation may be safe, timely, and effective. Therefore, it is prudent for each employer to take action to meet as many of the requirements of the HAZWOPER regulations before an incident occurs. Some of the specific items that can be done, partially or completely, prior to an incident are, written standard operating procedures and work plans, written emergency response plan, written site safety plan, general site worker safety and health training, respiratory protection training, emergency responder training, medical surveillance program, written personal protective equipment program, site monitoring strategies, decontamination procedures.

Operations falling within the scope of the HAZWOPER regulations are not excluded from the requirements of other safety regulations found in title 8 of the California Code or title 29 of the Federal Code, such as hazard communications, respiratory protection, occupational noise exposure, benzene, injury illness prevention, and others.

## **APPENDIX I SITE SAFETY**

Any scenario for a large oil spill will usually begin as an emergency response. Section (q) of references (a) & (b) covering employers whose employees are engaged in emergency response, requires that an emergency response plan be developed and implemented to handle anticipated emergencies prior to the commencement of emergency response operations. The first emergency response organization on scene must therefore develop and implement this plan. When other employers become involved in the emergency response the emergency response plans should be modified to cover their employees. Each employer must provide written draft of those sections which contains information specific to their employees and their duties.

The vast majority of large oil spills in the marine environment will generate cleanup operations separate from the emergency operation and ultimately the associated emergency response will be downgraded to a post-

emergency response. These cleanup operations and post-emergency response operations will be subject to sections (b) through (o) of references (a) & (b) and require site safety plans. Therefore both an emergency response plan and a site safety plan is usually required. Since the two plans have many common elements and an emergency response plan is required as part of the site safety plan, it would be prudent to develop a combined plan.

A plan which uses the combined site safety and emergency response plan was written by the California Department of Fish and Game Office of Oil Spill Prevention and Response. Their plan, titled "Site Safety Plan for Emergency Response and Clean-up Activities of Petroleum Chemical Releases in California", was distributed with the state's Guidance Document for use in the preparation of Marine Facility and Vessel Oil Spill Contingency Plans - Workforce Safety Training Requirements. This plan is recommended as a model to other response organizations.

A large spill in the marine environment may impact several physically separated sites. Therefore, it may be more convenient to treat these sites independently when writing and maintaining site safety and emergency response plans.

The following is a list of specific requirements, from references (a) & (b), that must be met prior to initial site entry or before an individual employee is allowed on site.

- 1) Employees who are expected to become involved in cleanup operations must be trained in accordance with section (e) before being permitted to participate in such operations.
- 2) Employees who are expected to wear a respirator must be covered under a respiratory protection program.
- 3) Employees must be enrolled in a medical surveillance program if;
  - a) they are or may be exposed to hazardous substances or health hazards at or above the permissible exposure limits for 30 days or more a year,
  - b) they wear a respirator for 30 days or more a year,
  - c) they are injured, become ill, or develop signs or symptoms due to possible overexposure involving hazardous substances,
  - d) they are a member of a HAZMAT team.
- 4) Required medical examinations and consultations must be made available by the employer to the employee prior to assignment.
- 5) The emergency response plan and/or site safety plan must be written prior to initial site entry.
- 6) Employees who are required to wear a respirator while working at a hazardous waste site must have received 40 hours off-site instruction before they are permitted to engage in hazardous waste operations. In addition they must receive three days actual field experience under the direct supervision of a trained, experienced supervisor.
- 7) Employees who are not required to wear a respirator and are unlikely to be exposed above permissible

exposure limits while working at a hazardous waste site must have received 24 hours off-site instruction before they are permitted to engage in hazardous waste operations. In addition they must receive one day actual field experience under the direct supervision of a trained, experienced supervisor.

8) The SSHP shall provide for pre-entry briefings to be held prior to initiating any site activity and at such times as necessary to ensure that employees are appraised of the SSHP.

9) A preliminary evaluation of a site's characteristics shall be performed prior to site entry.

10) Required Information. The following information to the extent available shall be obtained by the employer prior to allowing employees to enter a site:

- a) Location and approximate size of the site.
- b) Description of the response activity and/or the job task to be performed.
- c) Duration of the planned employee activity.
- d) Site topography and accessibility by air and roads.
- e) Safety and health hazards expected at the site.
- f) Pathways for hazardous substance dispersion.
- g) Present status and capabilities of emergency response teams that would provide assistance to hazardous waste cleanup site employees at the time of an emergency.
- h) Hazardous substances and health hazards involved or expected at the site, and their chemical and physical properties.

11) Appropriate site control procedures shall be implemented to control employee exposure to hazardous substances before cleanup work begins. The site control program shall include as a minimum: a site map; site work zones; the use of a buddy system; site communications including alerting means for emergencies; the standard operating procedures or safe work practices; and identification of the nearest medical assistance.

12) A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where potential for exposure to hazardous substances exists.

13) An emergency response plan shall be developed and implemented by all employers ... prior to the commencement of hazardous waste operations.

The following requirements pertain to initial entry.

1. PPE for initial site entry must be appropriate for the hazards identified during the preliminary

evaluation.

2. During initial site entry, if positive pressure self contained breathing apparatus is not used, and if respiratory protection is warranted by the potential hazards identified during the preliminary site evaluation, an escape self-contained breathing apparatus of at least 5 minutes duration shall be carried by employees during initial site entry.

3. If the preliminary site evaluation does not produce sufficient information to identify the hazards or suspected hazards of the site, an ensemble providing protection equivalent to level B PPE shall be provided as minimum protection, and direct reading instruments shall be used as appropriate for identifying IDLH conditions.

4. During initial site entry when the preliminary site evaluation produces information that shows the potential for IDLH conditions, or when the site information is not sufficient reasonably to eliminates these possible conditions, monitoring the air with appropriate direct reading test equipment for IDLH and other conditions that may cause death or serious harm shall be conducted.

## **ANNEX H HEALTH AND SAFETY**

### **APPENDIX II RESPIRATORY PROTECTION**

All workers that are required or allowed to wear a respirator during an emergency response or cleanup operation must be covered under an employer's respiratory protection program that meets the requirements of reference (c) and have received appropriate training as required in references (a), (b), and (c). Under the HAZWOPER regulations, the worker would require 40 hours of hazardous waste operations site safety and health training.

## **ANNEX H HEALTH AND SAFETY**

### **APPENDIX III TRAINING REQUIREMENTS**

All individuals responsible for responding to an oil spill must meet the health and safety requirements mandated in regulations by both State and Federal Occupational Safety and Health Administrations (OSHA). The amount of health and safety training required for each individual to respond to an oil spill will depend upon: the kind of tasks performed, the degree of exposure encountered, and the type of operation (emergency response vs post-emergency cleanup). Training shall be conducted by a qualified instructor and certified in writing upon completion. Proof of proper health and safety training will be required for each individual requesting entrance to the spill site. Proof of training should include: name of training class, hours of training received, dates of class, signature of the administrator of the employer's health and safety program, and description of course material covered in the class.

The initial training requirements for workers involved in the cleanup of uncontrolled hazardous waste sites and post-emergency response operations is summarized below.

1. General/Occasional Site Workers exposed above the PELs and/or required to wear respirators - 40 hours off-site and three days (24 hrs) actual field experience under the supervision of a trained supervisor.
2. General/Occasional Site Workers exposed below PELs and not required to wear respirators - 24 hours off-site and one day (8 hrs) actual field experience under the supervision of a trained supervisor.
3. Management and Supervisors of workers exposed below PELs and not required to wear respirators - 24 hours off-site plus 8 hours specialized training and one day actual field experience under supervision of a trained supervisor.
4. Management and Supervisors of workers exposed above PELs and/or required to wear respirators - 40 hours off-site plus 8 hours specialized training and three days actual field experience under supervision of a trained supervisor.
5. Although there is no provision in references (a) or (b), Federal OSHA and CAL OSHA have both stated in references (c) and (d) respectively, that during the post-emergency response cleanup of an oil spill, for job duties and responsibilities with a low magnitude of risk, a minimum of 4 hours site safety and health training may be appropriate. Neither agency has granted a blanket exclusion but has allowed the FED OSHA representative to the RRT to make the determination based on an assessment of the cleanup operation. Some of the criteria considered in this decision are:



- a) This is the workers first involvement in post-emergency response or cleanup operations and it is unlikely the worker will be involved in response activities in future incidents.
- b) Cleanup is performed in an area that has been monitored and fully characterized by a qualified person indicating that exposures are presently and can be expected to remain under permissible exposure limits and other published exposure limits.
- c) Health risks from skin absorption are minimal.

6. Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that required in references (a) and (b) shall not be required to provide the initial training to such employees and shall provide a copy of the certification or documentation to the employee upon request.

The training curriculum for the four hour training course provide to the onetime workers described in section III.5., must include:

- emergency response plan/site safety plan
- hazard communications
- decontamination procedures
- water safety
- hypothermia
- heat stress
- safety hazard controls
- personal protective equipment
- other safety training as needed

At a large oil spill, special groups of workers such as the California Conservation Corp, environmental groups, and vessels of opportunity may participate in the response and/or cleanup. These groups are identified in advance for emergency planning purposes and are likely to become involved as often as needed. Therefore, they must receive 24 or 40 hours of off-site training and appropriate supervised field experience depending on the potential level of exposure to hazardous substances. The Office of Oil Spill Prevention and Response (OSPR) intends to provide 24 hours of training to members of these groups. OSPR has developed a curriculum, for this 24-hour training. This curriculum, shown at the end of this annex, is recommended as a guide for developing other training programs. These workers may not enter an environment where they may be exposed above permissible exposure limits nor may they be required or allowed to wear respirators during response or cleanup operations unless 16 additional hour of off-site training and 16 additional hours of supervised field experience is provided.

Eight hours of refresher training is required annually for all site workers, managers, and supervisors. CAL OSHA has further interpreted this to mean that if a worker does not receive refresher training by each anniversary date of the completion of initial training, the initial training must be repeated.

## **OCCASIONAL/REGULAR SITE WORKER OSPR OIL SPILL HEALTH AND SAFETY COURSE CURRICULUM**

### REGULATIONS: Employee and Employer Roles and Responsibilities:

- T8, CCR, Section 5192 HAZWOPER
- Fed/OSHA Directive CPL 2-2.51 Post-Emergency Response

## Operations

- T8, CCR, Section 3203 Injury Illness Prevention Program
- T8, CCR, Section 3204 Access to Employee Exposure and Medical Reports

- T8, CCR, Section 3220 Emergency Action Plan
- T8, CCR, Section 3383 Body Protection
- T8, CCR, Section 3384 Hand Protection
- T8, CCR, Section 3385 Foot Protection
- T8, CCR, Section 3389 Life Rings and Personal Flotation Devices

- T8, CCR, Section 3400 Medical Services and First Aid
- T8, CCR, Section 5095-5100 Hearing Conservation Program
- T8, CCR, Section 5155 Airborne Contaminants
- T8, CCR, Section 5162 Emergency Eyewash and Shower Equipment
- T8, CCR, Section 5194 Hazard Communication
- Labor Code: Section 142.7 Hazardous Substance Removal
- Labor Code: Section 6100 Workers' Compensation
- Labor Code: Section 6300 Jurisdiction and Duties of the Occupational Safety and Health Act
- Labor Code: Section 6400 Health and Safety Responsibilities of Employees and Employers
- T8, CCR, Section 5157 Confined Spaces (Recognition of Confined Space Hazards)
- T8, CCR, Section 341 (Recognition of Shoring and Excavation Hazards)
- T8, CCR, Section 3661 and 3664 Industrial Trucks, Tractors, Haulage Vehicle and Earthmoving Equipment (Recognition of Heavy Equipment Operation Hazards During Oil Spill Cleanup Operations)

## OPERATIONAL ACTIVITIES: Under The Unified Incident Command System

- Communication and coordination with any and all agencies having authorized activities dealing with oil spills (roles and responsibilities).
- Local contingency plans jurisdiction when dealing with oil spills. Discussion of purpose, components, value and limitations of pre-event and event specific planning.
- Incident Command System and unified version, describe the basic implementation and how it manages an oil spill and demonstrate proper information flow from ICS stall to the incident commander.

## SITE HEALTH AND SAFETY PLAN FOR OIL SPILLS

- Site Description
- Hazard Identification and Recognition
- Personal Protective Equipment
- Hazard Evaluation/Risk Identification

- Exposure Monitoring Program (General area and breathing zone)
- Onsite Control
- Decontamination
- Safe Distances and Places of Refuge
- Evacuation Routes and Procedures
- Emergency Medical Treatment/First Aid
- Emergency Alert and Response Procedures

### HAZARD COMMUNICATION

- Health Effects and Chemistry of Oil (Benzene, Toluene, Xylene, Hydrogen Sulfide, Diesel Fuel, Gasoline, Crude Oil, Bunker C, MTBE, etc.)
- Thermal Stress
- Water Safety (Personal Flotation Devices)
- Physical Hazards (including electrical, heavy equipment, confined spaces, trenches, shoring, excavation, etc.)
- Biological Hazards
- Slips, Trips, and Falls
- Ergonomics
- Hearing Conservation
- Workers' Compensation
- Accident Prevention and Reporting

### ANIMAL HANDLING TECHNIQUES

- Occupational health and safety hazards associated with the capture, transport, cleaning, rehabilitation, and release of oiled marine wildlife:
  - a. Required personal protective equipment
  - b. Decontamination of personal protective equipment
  - c. Slips, trips, and falls (e.g. mob cart)
  - d. Safe lifting and handling techniques of large mammals
  - e. Water safety during capture and release of animals
  - f. Bites, pecks, and scratches
  - g. Zoonosis

### OIL SPILL CLEANUP TECHNIQUES

- Health and safety hazards associated with manual oil cleanup activities
- Safe work practices with oil cleanup tools and equipment

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## **ANNEX I SCENARIO DEVELOPMENT**

As required by OPA-90, a most probable discharge, a maximum most probable discharge, and a worst case discharge are presented. An additional scenario for the North Coast Area, a “Discharge of Maximum Impact”, is also included. The two following scenarios take place in two separate regions of the California coastline. The first takes place along the Northcoast area within the MSO San Francisco AOR. The Second is along the Southern California shoreline within the southern sector of the MSO LA/LB AOR.

### **APPENDIX I MOST PROBABLE DISCHARGE (NORTH COAST AREA)**

The Coast Guard has determined that 0-50 barrels is a reasonable volume for planning the most probable discharge because it is based on national operational spill data and evaluation of historical trends in smaller size spills. This value is adopted for consistency with Federal and State Vessel and Facility Contingency Plans.

#### **HISTORICAL SPILL CONSIDERATIONS**

Appendix III of North Coast Area Annex E contains the local historical spill data and analysis. The local historical average spill size of 77 gallons (1.8 barrels) is at the lower end of the 0-50 barrel national average range. A spill of this size is considered a “routine” spill size and insufficient for planning purposes. Therefore, this plan has adopted a larger value (approximately 25 barrels) within the 0-50 barrel range.

The most probable reason for a spill of this magnitude is due to an automatic bilge pump discharging dirty bilge water or from the loss of diesel fuel from a sinking fishing vessel.

Other common causes of these 0-50 barrel most probable spills include human error, mechanical failure, or tank or pipe rupture.

#### **HAZARD AND RISK ASSESSMENTS**

A spill of this magnitude could occur in Humboldt Bay, Crescent City Harbor, Fort Bragg, Cape Mendocino, or anywhere along the Northern Coast of California. Fishing and recreational vessel traffic, marinas and some industrial areas are located in these areas. Humboldt Bay has four marine oil transfer facilities and is considered to be the area of greatest hazard due to the relative size of the port, volume of traffic and potential navigational hazards (see Annex E, Appendix III for further information). Although Humboldt Bay is considered the area of greatest potential hazard, Crescent City Harbor was chosen as the site for this scenario to consider other areas at risk. Seasonal considerations for Environmentally Sensitive Areas are addressed in Appendix V to Annex E. Weather is the primary seasonal consideration with the winter months experiencing numerous storms with heavy rains and winds. Summer months typically have a weather pattern of heavy morning and late afternoon fog which could affect response times and operations.

#### **VULNERABILITY ANALYSIS**

Proximity of these hazards to the most sensitive areas, i.e. environmentally sensitive areas is of primary concern. See Annex E for specific information on environmentally sensitive areas.

#### **DESCRIPTION OF THE EVENT**

##### **MOST PROBABLE DISCHARGE (NORTH COAST AREA)**

**Situation:** A small diesel powered fishing vessel sinks at the dock in Crescent City Harbor. It is loaded with 800

gallons of fuel, 20 gallons of lube oil.

**Location:** Crescent City Harbor

**Amount:** The boat is sunk with 800 gallons of fuel and 20 gallons of lube oil on board. The fuel is leaking out through tank vents and loose fill caps. All of the lube oil has come out of the open lube oil container.

**Securing Source:** Since the vessel is sunk, the source can only be secured by divers or by raising the vessel.

**Areas at Risk:** The sensitive environment within the Crescent City Harbor.

**Time of Year:** Coincident with sensitive season for several species of wildlife.

**Weather:** Nighttime with fog.

Wind: 30 kts.SW to W

Visibility: 1/2 mi.

Seas: 1-2 ft.

Current: Max Flood

## INITIAL ACTIONS

**The initial actions and response strategies described for each scenario were developed as the final step in this planning cycle and are considered to be the key events likely to occur. Many variables arise in an actual event and not all options were considered for this planning cycle. During future planning cycles, these scenarios will be played out in table top and field exercises. This Annex will be revised and expanded in detail based on the results of the exercises.**

## NOTIFICATION

Notification will proceed in accordance with TAB A to Appendix II to Annex J. Key notifications will be to the NRC, State OES, and Group Humboldt Bay. Attempts will be made to notify other vessel owners in the area, if their vessels are at risk.

## ACTIVATION OF RESPONSE

The major questions to be answered are: Has the source been secured?; How much time remains to effectively boom the vessel?; Is an RP readily identifiable?; and, Is cleanup feasible? To answer these questions, it is important to establish effective communications with the first available person on scene. This person is likely be the local harbor/marina master, citizen or fisherman, an OSPR warden or a Coast Guardsman. Marine Safety Office, San Francisco Bay, once notified begins immediate assessment of the situation.

The primary concerns, after ensuring safety of life, is to stop the source and to contain the spilled fuel. If there is an RP, MSO San Francisco Bay, Port Operations Department, will discuss the response options with him/her. It is not likely that the RP will have containment boom, therefore, the two most rapid means of boom deployment would be from the CGC EDISTO (less than 2 hours for boom to be fully deployed) or, if the CGC EDISTO is underway, from either the RP or CG (non-BOA) contracting Pacific Affiliates in Eureka (2-4 hours until boom is fully deployed). In any event, it is likely that the spill would require opening the OSLTF. If fuel remains onboard, the RP contracts a local diver to plug the fuel vents and remove the remaining fuel and lube oil from the vessel. The major contribution hampering the response effort is the fact that the spill has occurred during the night making the diesel very difficult to see. This possibly reduces the effectiveness of the booming efforts.



## **INVESTIGATION**

The initial investigation is conducted by Group Humboldt Bay reserve pollution investigators, for the Coast Guard, and by the local OSPR warden for the State. Subsequently, MSO San Francisco dispatches personnel to the scene to continue the investigation and to monitor the cleanup operations.

## **RESPONSE ORGANIZATION**

The response organization used is the organization for routine operations for the Coast Guard, State, Local, and RP. Establishment of the Unified Command is not necessary.

## **CONTAINMENT, COUNTERMEASURES, AND CLEANUP STRATEGIES**

Containment is accomplished by deploying boom around the sunken vessel or area encompassing the spill. Cleanup is most likely accomplished through the use of sorbents. Due to the type and quantity of oil and the location, the decisions are concurrently made that dispersants or in-situ burning will not be employed. Protection at Elk Creek and the entrance to Crescent City Harbor are paramount. A modification of the protective booming strategies detailed in Appendix V of North Coast Area Annex E are deployed in the event that these two environmentally sensitive sites are at risk.

## **RESOURCES REQUIRED AND SHORTFALLS**

If the vessel is 40-50 ft in length, it is expected that approximately 150 ft of boom would be required for containment. Additional boom is required if protection of environmentally sensitive sites is necessary. If the CGC EDISTO is underway, the response time for fully deploying equipment is increased due to the distance from Eureka to Crescent City. If equipment were pre-staged in Crescent City, this response time could potentially be avoided. If protective booming is necessary for the environmentally sensitive sites, there would be a shortfall in the additional boom required. Depending on the extent of booming necessary, there will likely be a shortfall of boats to deploy the boom used for protection.

## **ESTIMATED TIME TO CLEANUP THE SPILL**

The entire cleanup is expected to take 1-2 days. The spill site is considered “clean” when all the fuel is removed from the vessel and all visible product is removed from the water (no sheen).

**Crescent City, California Plan  
Oil Spill Trajectory Notes**

MOST PROBABLE DISCHARGE

Model Limitations and Caveats

For this Area Plan oil spill scenario, only user-specified winds were used.

For offshore areas, current patterns are based on average seasonal conditions. Current perturbations from wind events, shelf waves, and eddy events are not predictable and therefore not included in the model. Similarly, local small scale phenomena, such as eddies off spits or in rivers and local convergences or divergences are not modeled.

The model does not account for oil that picks up sediment and sinks. This can occur in high sediment rivers and along high energy sand beaches.

Additional Notes

A small fishing boat sinks while tied to the pier in Crescent City Harbor, California. 1400 gallons of diesel fuel (API 39.4) and 20 gallons of lube oil are quickly released into the water. The boat is tied to the long pier on the west side of the harbor, next to the west breakwater. Winds are from the southwest at 30 knots and the tide is flooding.

A spill of 1400 gallons of diesel fuel, under persistent 30 knot southwest winds and a flood tide, would probably result in a slick extending about a half mile from the spill. Further away from the spill's source the slick would begin breaking up and reach the beaches, which are about a mile away, as patches and streamers of oil. The spill would probably impact the east and northeast shores of Crescent City Harbor. The oil would probably reach these shorelines about one hour after the spill.

Because it is difficult to predict the height of waves in Crescent City Harbor under 30 knots of wind, three different runs from a program that estimates oil weathering (ADIOS version 1.0.1) are attached. The outputs give estimates of the amount of diesel fuel that will remain with waves of one foot, two feet and three feet.

The small amount of lube oil spilled, 20 gallons, should have a relatively slight effect. After being broken up by the wind and seas, the lube oil may form some scattered tarballs. The tarballs from lube oil can persist for several weeks; however, with the small amount of lube oil spilled the tarballs would probably be widely scattered and quite small within a short time.

# Oil Budget Table

## Oil Budget Table

Adios 1.0.1



Oil Name: DIESEL  
 API: 39.4  
 Wind Speed: Constant at 30 kn  
 Water Temperature: 65 F  
 Instantaneous release of 1400 gal  
 Pour Point: -4.0 F  
 Emul. Const.: No emulsification expected  
 \*Insufficient distillation & emulsification data, answers may be inaccurate.

| Time<br>hours | Total Released<br>gallons | Evaporated<br>percent | Dispersed<br>percent | Floating<br>percent |
|---------------|---------------------------|-----------------------|----------------------|---------------------|
| 0             | 1,400                     | 0                     | 0                    | 100                 |
| 3             | 1,400                     | 52                    | 7                    | 41                  |
| 6             | 1,400                     | 59                    | 13                   | 28                  |
| 9             | 1,400                     | 62                    | 18                   | 20                  |
| 12            | 1,400                     | 64                    | 21                   | 15                  |
| 15            | 1,400                     | 65                    | 23                   | 12                  |
| 18            | 1,400                     | 66                    | 25                   | 9                   |

Oil Name: DIESEL  
 API: 39.4  
 Wind Speed: Constant at 30 kn  
 Water Temperature: 65 F  
 Instantaneous release of 1400 gal  
 Pour Point: -4.0 F  
 Emul. Const.: No emulsification expected  
 \*Insufficient distillation & emulsification data, answers may be inaccurate.

| Time<br>hours | Total Released<br>gallons | Evaporated<br>percent | Dispersed<br>percent | Floating<br>percent |
|---------------|---------------------------|-----------------------|----------------------|---------------------|
| 0             | 1,400                     | 0                     | 0                    | 100                 |
| 1             | 1,400                     | 35                    | 3                    | 62                  |
| 2             | 1,400                     | 46                    | 10                   | 44                  |
| 3             | 1,400                     | 51                    | 16                   | 33                  |
| 4             | 1,400                     | 53                    | 20                   | 27                  |
| 5             | 1,400                     | 55                    | 24                   | 21                  |
| 6             | 1,400                     | 56                    | 26                   | 18                  |
| 7             | 1,400                     | 57                    | 29                   | 14                  |
| 8             | 1,400                     | 57                    | 30                   | 13                  |
| 9             | 1,400                     | 58                    | 32                   | 10                  |

Oil Name: DIESEL  
 API: 39.4  
 Wind Speed: Constant at 30 kn  
 Water Temperature: 65 F  
 Instantaneous release of 1400 gal  
 Pour Point: -4.0 F  
 Emul. Const.: No emulsification expected  
 \*Insufficient distillation & emulsification data, answers may be inaccurate.

| Time<br>hours | Total Released<br>gallons | Evaporated<br>percent | Dispersed<br>percent | Floating<br>percent |
|---------------|---------------------------|-----------------------|----------------------|---------------------|
| 0             | 1,400                     | 0                     | 0                    | 100                 |
| 1             | 1,400                     | 35                    | 6                    | 59                  |
| 2             | 1,400                     | 45                    | 15                   | 40                  |
| 3             | 1,400                     | 49                    | 23                   | 28                  |
| 4             | 1,400                     | 52                    | 29                   | 19                  |
| 5             | 1,400                     | 53                    | 33                   | 14                  |
| 6             | 1,400                     | I-13-5                | 36                   | 11                  |

## **APPENDIX II MAXIMUM MOST PROBABLE DISCHARGE (NORTH COAST AREA)**

The maximum most probable discharge takes into account such factors as the size of the largest recorded spill, traffic flow through the area, hazard assessment, risk assessment, seasonal considerations, spill histories, and operating records of facilities and vessels in the area.

### **HISTORICAL SPILL CONSIDERATIONS**

Appendix III of North Coast Area Annex E contains the local historical spill data and analysis. Spill history indicates a maximum most probable spill of approximately 3000 gallons (71 barrels). While this value is greater than the value adopted for the most probable spill discussed in the preceding pages, it is considered insufficient for planning purposes. A higher value (2,500 barrels) within the national average of 50-2,500 barrels has therefore been adopted for planning considerations.

There are very few potential sources for a discharge of this size within the North Coast. However, the possibility of such a spill cannot be disregarded. Possible causes include a tank or pipeline rupture at one of the three North Coast marine oil transfer facilities, a catastrophic error during transfer operations between a facility and a tank barge or tank vessel, and the holing of a loaded tank barge or tank vessel.

### **HAZARD AND RISK ASSESSMENT**

As mentioned above, a discharge of this magnitude would likely involve a marine oil transfer facility, tank barge or tank vessel. Humboldt Bay is the only port within the North Coast that contains marine oil transfer facilities. It is also the only port in the area that receives tank vessels or tank barges. As such, it is considered the area of greatest risk.

The expanse of waters offshore is another possible location for a 2,500 barrel spill of diesel. Tank vessels and tugs with tank barges frequently transit the coast going to and from Alaska, San Francisco, Los Angeles and other West Coast ports. Although many tank vessels have voluntarily agreed to transit fifty or more nautical miles offshore, many transit within fifty nautical miles. Furthermore, coastwise tug and tank barge traffic almost exclusively transits within fifty nautical miles, as the short voyages relative to those of tankers make such measures unrealistic and tremendously cost prohibitive.

Several navigational hazards exist in these waters. The coastline is characterized by numerous rocky headlands, wave-cut platforms, submerged rocks, and sea stacks. Inclement weather conditions are also inherent to the entire North Coast. Storms with heavy rains and high winds occur throughout the year, though primarily during winter months. Summer months typically have heavy morning and late afternoon fog.

While the maximum most probable spill could occur as a result of any of the previously discussed accidents, a mishap during transfer operations was selected for this scenario. The relative ease in securing the spill source during transfer operations (versus tank ruptures and vessel groundings or collisions) make it the logical choice. Vessel scenarios were selected for both the worst case discharge and discharge of maximum impact.

### **VULNERABILITY ANALYSIS**

Most of the numerous environmentally sensitive sites throughout Humboldt Bay are at risk. These sites include wildlife refuges, sheltered tidal flats, salt marshes, commercial oyster beds and farmed wetlands. For a complete description of the environmentally sensitive and economically significant areas at risk, see Annex E.

### **SCENARIO: MAXIMUM MOST PROBABLE DISCHARGE (NORTH COAST AREA)**

**Situation:** An accident occurs during the transfer of diesel from a tank barge to the Chevron Facility in Eureka. Diesel

is discharged into Humboldt Bay for several minutes until the transfer line is secured. (**The facility was chosen at random** and the fact that it is used in this scenario should not be interpreted to mean that historical spill data indicates a potentially higher risk at this facility.) The two barge personnel begin deploying boom in an effort to contain the spill. Meanwhile, the Chevron employee calls the terminal manager to inform him of the spill. The terminal manager initiates notifications by calling the National Response Center (NRC), State of California Office of Emergency Services (OES), and Humboldt Bay Response Corporation (formerly Pacific Affiliates). Although not required by law, the terminal manager would likely call Coast Guard Group Humboldt Bay as well.

**Location:** Humboldt Bay, Chevron Facility

**Amount:** 2,500 barrels of diesel enter the water. (Note: Due to the ability to secure the source at a transfer facility, it is recognized that a spill at a facility could arguably be less than the 2,500 barrel volume. However, this value was chosen as the maximum most probable quantity for planning purposes.)

**Securing Source:** Transfer piping is secured by the Chevron employee overseeing the transfer operation.

**Areas at Risk:** All of Humboldt Bay is at risk. Due to weather and tidal conditions, the areas in the immediate vicinity and north of the Chevron facility are particularly at risk. These areas include Palco Marsh, Indian, Woodley and Daby Islands, Eureka Slough, Elk River, and the entire North Bay (Arcata Bay).

**Time of Year:** Early-May

**Weather:** Nighttime with fog.  
Wind: 30 knots, SW to W  
Visibility: 1/2 mi.  
Seas: 1-2 ft.  
Current: Max Flood

## **INITIAL ACTIONS**

### **NOTIFICATION**

As mentioned above, key notifications are made by the terminal manager to NRC, State OES, CG Group Humboldt Bay, and Humboldt Bay Response Organization. NRC notifies Coast Guard Marine Safety Office (MSO) San Francisco Bay via “flash fax”. Coast Guard Group also notifies the MSO, recalls the MSO liaison assigned to the Group, and notifies the local State Office of Oil Spill Prevention and Response (OSPR) warden. State OES notifies

OSPR headquarters in Sacramento and Humboldt County Sheriff’s Dispatch Center (the county’s designated local emergency contact). MSO San Francisco notifies the Eleventh Coast Guard District Office and alerts the Pacific Strike Team. Numerous other notifications are carried out, as shown in Annex J, Appendix II, Tab A.

### **ACTIVATION OF RESPONSE**

The facility implements their facility response plan and initiates appropriate response actions. The major questions to be answered, after ensuring the safety of life, are:

Has the source been secured? and  
How much time remains to effectively boom the area?

The facility has 1100 feet of boom which is immediately deployed to contain as much oil as possible. Marine Safety

Office San Francisco Bay's liaison (attached to Group Humboldt Bay) is dispatched to assess the situation, arriving on scene within 30 minutes. The local OSPR warden and a Humboldt Bay Response Corporation representative also arrive on scene within 30 minutes to assess the situation. Upon arriving on scene, these individuals meet with the Chevron's Incident Commander to develop immediate strategies and priorities (taking into consideration wind and sea state) to minimize the spread of oil. The local OSPR Biologist is called to assist with this prioritization.

The MSO arranges to fly 2-3 command representatives to the scene via CG helicopter. The MSO Command Duty Officer (CDO) and watchstander issue a Broadcast Notice to Mariners, establish a safety zone to prevent vessel traffic from transiting the area, and open the Oil Spill Liability Trust Fund (OSLTF) requesting an initial ceiling of \$25,000. Inbound traffic is monitored by Coast Guard Station Humboldt Bay.

Pre-loaded equipment from Humboldt Bay Response Corporation is transported to the site via tractor trailers and/or small boats launched from the City of Eureka boat launch (east side of Route 255 bridge) or the Fields Landing launch ramp. The personnel and equipment arrive on scene within 1.5 hours.

With a spill of this magnitude, a significant quantity of oil will likely spread from the source. As such, additional personnel and equipment are requested from nearby facilities, Coast Guard Group Humboldt Bay, California Conservation Corps, Coast Guard Pacific Strike Team, Marine Spill Response Corporation and local fishermen's organizations. Nearby facilities could have their personnel and equipment on scene within 1.5 hours of notification. CG personnel and equipment could arrive within 2 hours of notification. Trained response personnel from California Conservation Corps could arrive within 2 hours of notification. Personnel and equipment from the Pacific Strike Team and MSRC are dispatched via truck to arrive in approximately 5-8 hours. Local fishing vessels capable of deploying MSRC or CG VOSS systems are outfitted with a VOSS and ready to be deployed within 5 hours.

## **INITIAL RESPONSE ACTIONS**

On-water recovery of product at the leading edge of the slick will be performed by MSRC skimming vessels and fishing vessels equipped with a VOSS. However, time delays in the deployment of will be experienced. MSRC has no personnel in Humboldt Bay and Humboldt Bay Response Organization personnel have not yet been trained in the use of MSRC equipment. Also, as mentioned above, VOSS systems generally take 5-7 hours to install and will not be available for initial response. As such, booming strategies allowing for shoreside collection and skimming of product (vacuum trucks) must be implemented.

The three Palco Marsh culverts north of the Chevron facility should be closed immediately to prevent oiling of sensitive marshlands. These culverts currently have no floodgates; therefore, they must be manually blocked using sandbags, sediment or rocks. Exclusionary booming should also be performed at each of these culverts and at Elk River (see Annex E, sites A-1-037 and A-1-038).

Preventing oil from entering the northern portion of Humboldt Bay (Arcata Bay) should be given a very high priority. Not only is the area extremely sensitive, but it is comprised mainly of shallow water and mud flats, which significantly reduce the ability to respond. Deflection booming could be implemented at locations south of Woodley Island, south of Indian Island, and along the Eureka waterfront to deflect product toward various collection sites south of Arcata Bay. Due to natural pooling in the area, the southwestern tip of Woodley Island should receive consideration as a site to collect and skim recovered product. Additional collection and skimming sites in this area might include the Louisiana Pacific and Simpson docks along the Samoa Peninsula. Recommended strategies for this area of Humboldt Bay are found in Annex E, site A-1-036.

As much skimming and protective booming as possible is completed during the night with available boom. At first light, a CG Group Humboldt Bay helicopter conducts an overflight with CG, State of California and Responsible Party representatives aboard. Planning for any adjustments to the initial response strategies occurs immediately.

## **RESPONSE ORGANIZATION**

The response organization is a modified Unified Command System (UCS) involving primarily the Operations and Planning sections. A public information team is also part of the response organization. Until additional personnel arrive from Alameda and Sacramento, respectively, the MSO liaison will assume the role of Federal On-Scene Coordinator (FOSC) and the local OSPR warden will assume the role of State On-Scene Coordinator (SOSC). The Responsible Party's Incident Commander will likely be the terminal manager until a member of the company's regional headquarters or corporate spill management team arrives.

The Operations section will be staffed primarily by Humboldt Bay Response Corporation personnel with Coast Guard and State of California monitors. A command post could be located either at the facility at one of the command center sites detailed in Annex F. The forward staging area is located at the Humboldt Bay Response Corporation/MSRC dock.

## **CONTAINMENT, COUNTERMEASURES, AND CLEANUP STRATEGIES**

Prior to implementing any cleanup operations, the FOSC ensures that personnel involved in these operations have the appropriate level of training and are using appropriate personal protective equipment.

Containment is accomplished by implementing the booming strategies discussed above. The goals of containment are to hold and recover the spilled product to minimize shoreline impact. Since this spill is within the bay, it is decided not to use dispersants or in-situ burning. The open-water recovery is accomplished by skimmers and sorbents. The Pacific Strike Team may

deploy the Coast Guard On-water Containment and Recovery System (OWCRS) for skimming operations within Humboldt Bay, if appropriate towing vessels are available and if water depths permit. One difficulty encountered in open water recovery is the shallowness of certain areas in the bay, which are often left exposed at low tide. Considering that more severe damage may result, the Unified Command should decide to what extent any impacted marshlands will be cleaned. If shoreline cleanup is necessary, it will involve the usual raking and shoveling of debris and product.

## **RESOURCES REQUIRED AND ESTIMATED SHORTFALLS**

The facility's boom and boat is likely to be overwhelmed by a spill of this size. Humboldt Bay Response Organization can supply approximately 10,000 feet of boom, in addition to the facility boom. Depending on the success of initial containment efforts, additional boom and skimmers, in excess of that available from Humboldt Bay Response Corporation, may be required. MSRC and the CG have pre-staged additional boom and skimming equipment at the Humboldt Bay Response Corporation warehouse. The local MSO trailer can provide an additional 2,700 feet of boom and the CGC EDISTO (homeported in Crescent City) has 1,800 feet.

Four to eight skimmers, storage bladders, and roughly five tank trucks would be required.

Additional personnel will most likely be required for a spill of this magnitude. California Conservation Corps should be contacted to augment the personnel that Humboldt Bay Response Organization and local facilities provide. Personnel from MSRC, MSO San Francisco Bay and the Pacific Strike Team will also be required.

Response shortfalls are addressed at the end of this annex.

## **ESTIMATED TIME TO CLEANUP THE SPILL**

The time to complete cleanup will depend on the effectiveness of the initial containment efforts. Open water recovery will take approximately 2 weeks, while shoreline cleanup can be expected to take 30-45 days.

**Humboldt Bay, California  
Area Plan  
Oil Spill Trajectory Model Notes**

MAXIMUM MOST PROBABLE DISCHARGE

Model Limitations and Caveats

For this Area Plan oil spill scenario, only user-specified winds were used.

For offshore areas, current patterns are based on average seasonal conditions. Current perturbations from wind events, shelf waves, and eddy events are not predictable and therefore not included in the model. Similarly, local small scale phenomena, such as eddies off spits or in rivers and local convergences or divergences are not modeled.

Tidal information is based on NOS Tide Tables and does not reflect short term episodic events such as heavy runoff from floods or storm surges.

The model does not account for oil that picks up sediment and sinks. This occurs in high sediment rivers and along high energy sand beaches.

For large spills of the type being modeled for these scenarios, secondary sources of oil, such as refloating of oil from the shoreline, can be a significant problem. In this model, shorelines were coded so that the oil would not "stick" but would refloat after each tidal cycle. This allows more oil to move with tidal action and provides a more widespread impact. This procedure is used to enhance the "worst-case" scenario. In actual fact, wherever the model indicates shoreline impacts, the oil would mostly remain beached. However, some of the oil would refloat on high tides and be available to impact other areas.

Additional Notes

The model was run for 48 hours (May 5 - May 7, 1993) using the following spill scenario:

An accident occurs while diesel fuel is being transferred via pipelines at the Chevron Facility on Humboldt Bay. 2,500 barrels of Fuel Oil No. 2 are quickly spilled into the water.

Winds are constant at a stiff 30 knots from the WSW throughout the spill. Due to the short duration of the scenario (48 hours), only user-specified winds were used. No statistical winds were used.



Humboldt Bay, California cont.

The predicted tidal currents at Humboldt Bay (NOS Tidal Station No. 801), for the dates of the modeled spill, were used. The ebb and flood currents, at their maximum velocity, range from about 1.6 knots to 2.9 knots during this period. The modeled spill begins before a flood tide.

The oil type used in this scenario is No. 2 Fuel Oil, of which furnace, auto diesel, and stove fuels are common types. A spill of this kind of oil will typically form a heavy sheen, with lots of oil streamers. Shoreline impacts can usually be characterized as "bathtub ring" type stains. No. 2 Fuel Oil is toxic, so some of the fish and other marine life in the affected areas will probably be killed. In this scenario, the sensitive mud flats of Arcata Bay will probably suffer some fish kills.

Due to the strong 30 knot winds, the oil will be largely evaporated and/or dispersed after about 40 hours.

As shown on the oil spill scenario maps, the areas most probably impacted during this modeled spill will be the western and northern shores of the city of Eureka. No oil is expected to leave Humboldt Bay and impact the outer beaches. Although not shown in the results of the model run, the eastern side of Arcata Bay would also probably receive some oiling. The oil, pushed by the prevailing winds, would probably have more of a beach "staining" effect here than a more severe effect. In addition, some of the oil will probably flood back into the Elk River entrance.

# Oil Budget Table

## Oil Budget Table

Adios 1.0.1



Oil Name: FUEL OIL NO.2 (DIESEL), CHEVRON

API: 35.3

Pour Point: 0.0 F

Wind Speed: Constant at 30 kn

Emul. Const.: No emulsification expected

Water Temperature: 70 F

Instantaneous release of 2500 bbl

\*Insufficient distillation & emulsification data, answers may be inaccurate.

| Time<br>hours |       | Total Released<br>barrels |       | Evaporated<br>percent |       | Dispersed<br>percent |       | Floating<br>percent |
|---------------|-------|---------------------------|-------|-----------------------|-------|----------------------|-------|---------------------|
| 0             | ----- | 2,500                     | ----- | 0                     | ----- | 0                    | ----- | 100                 |
| 3             |       | 2,500                     |       | 24                    |       | 1                    |       | 75                  |
| 6             | ----- | 2,500                     | ----- | 35                    | ----- | 4                    | ----- | 61                  |
| 9             |       | 2,500                     |       | 42                    |       | 8                    |       | 50                  |
| 12            | ----- | 2,500                     | ----- | 46                    | ----- | 12                   | ----- | 42                  |
| 15            |       | 2,500                     |       | 50                    |       | 16                   |       | 34                  |
| 18            | ----- | 2,500                     | ----- | 52                    | ----- | 20                   | ----- | 28                  |
| 21            |       | 2,500                     |       | 54                    |       | 23                   |       | 23                  |
| 24            | ----- | 2,500                     | ----- | 55                    | ----- | 25                   | ----- | 20                  |
| 27            |       | 2,500                     |       | 56                    |       | 27                   |       | 17                  |
| 30            | ----- | 2,500                     | ----- | 57                    | ----- | 29                   | ----- | 14                  |
| 33            |       | 2,500                     |       | 57                    |       | 30                   |       | 13                  |
| 36            | ----- | 2,500                     | ----- | 57                    | ----- | 31                   | ----- | 12                  |
| 39            |       | 2,500                     |       | 58                    |       | 32                   |       | 10                  |

# Tidal Currents at Humboldt

Tidal currents at Humboldt :

Station No. 801

Latitude: 40 48 N

Longitude: 124 11 W

Maximum Flood Direction 016 ees

Maximum Ebb Direction 211 ees

Time offsets Hour:Min

Minimum Before Flood -01:14

Flood -01:02

Minimum Before Ebb -00:54

Ebb -00:50

Based on San Francisco Bay E

Corrected time and currents Humboldt Bay

Adjusted for daylight saving e.

| Date     | Time  | Max Vel<br>(Knots) | Description      |
|----------|-------|--------------------|------------------|
| -----    |       |                    |                  |
| 05/04/93 | 16:56 | .00                | Min Before Flood |
| TU       | 20:03 | 2.22               | Max Flood        |
|          | 23:08 | .00                | Min Before Ebb   |
| -----    |       |                    |                  |
| 05/05/93 | 2:16  | -2.60              | Max Ebb          |
| WE       | 5:40  | .00                | Min Before Flood |
|          | 8:53  | 2.64               | Max Flood        |
|          | 12:13 | .00                | Min Before Ebb   |
|          | 14:47 | -1.75              | Max Ebb          |
|          | 17:42 | .00                | Min Before Flood |
|          | 20:47 | 2.22               | Max Flood        |
|          | 23:48 | .00                | Min Before Ebb   |
| -----    |       |                    |                  |
| 05/06/93 | 3:02  | -2.85              | Max Ebb          |
| TH       | 6:28  | .00                | Min Before Flood |
|          | 9:42  | 2.82               | Max Flood        |
|          | 13:07 | .00                | Min Before Ebb   |
|          | 15:37 | -1.65              | Max Ebb          |
|          | 18:26 | .00                | Min Before Flood |
|          | 21:31 | 2.16               | Max Flood        |
| -----    |       |                    |                  |
| 05/07/93 | 0:29  | .00                | Min Before Ebb   |
| FR       | 3:48  | -2.90              | Max Ebb          |
|          | 7:15  | .00                | Min Before Flood |
|          | 10:31 | 2.82               | Max Flood        |
|          | 13:59 | .00                | Min Before Ebb   |
|          | 16:22 | -1.55              | Max Ebb          |
|          | 19:11 | .00                | Min Before Flood |
|          | 22:13 | 2.04               | Max Flood        |
| -----    |       |                    |                  |
| 05/08/93 | 1:12  | .00                | Min Before Ebb   |
| SA       | 4:34  | -2.90              | Max Ebb          |
|          | 8:03  | .00                | Min Before Flood |
|          | 11:17 | 2.70               | Max Flood        |
|          | 14:50 | .00                | Min Before Ebb   |
|          | 17:09 | -1.40              | Max Ebb          |
|          | 19:57 | .00                | Min Before Flood |
|          | 22:57 | 1.86               | Max Flood        |
| -----    |       |                    |                  |
| 05/09/93 | 1:55  | .00                | Min Before Ebb   |
| SU       | 5:17  | -2.70              | Max Ebb          |
|          | 8:52  | .00                | Min Before Flood |
|          | 12:08 | 2.46               | Max Flood        |

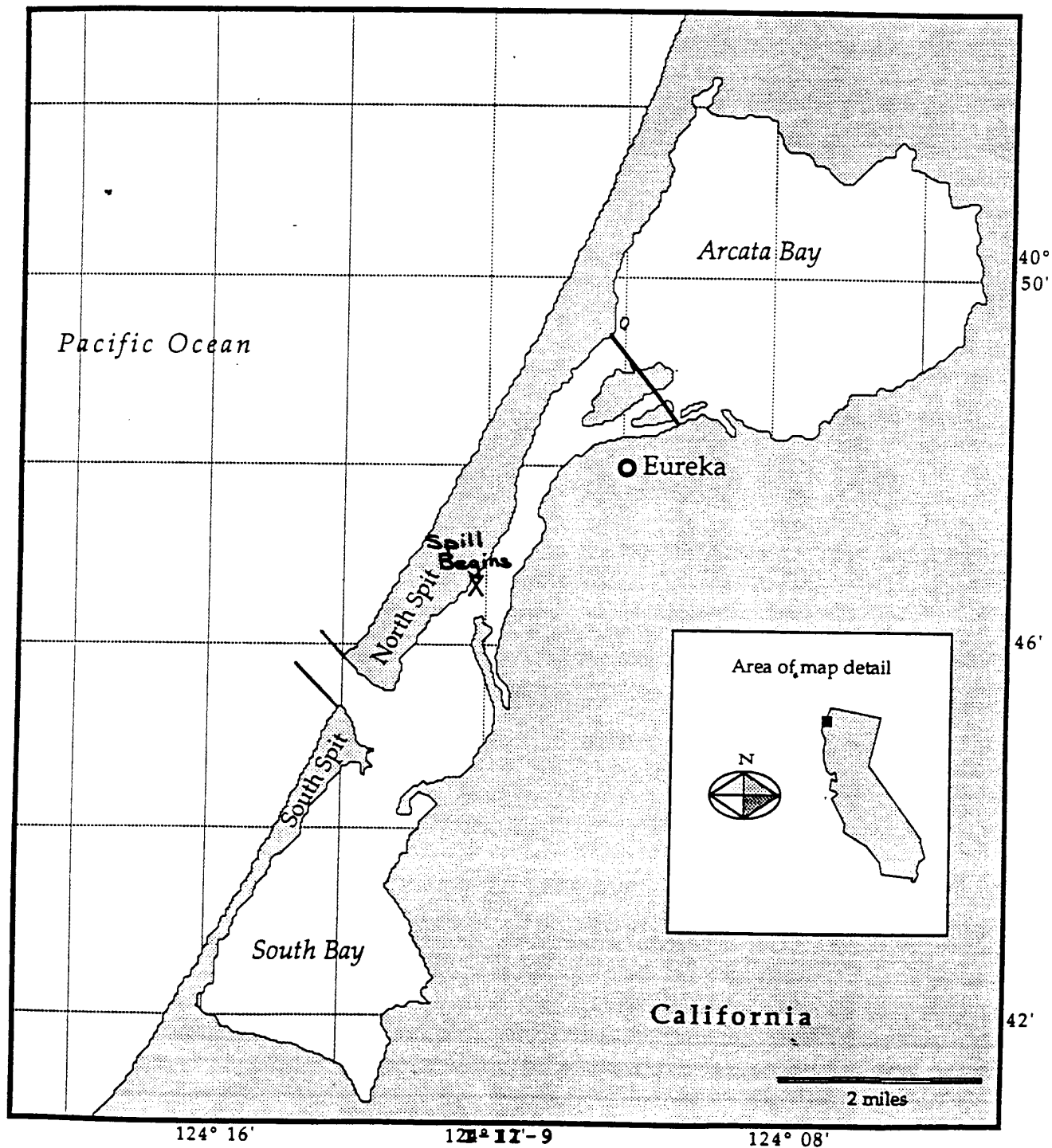
## Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 05 May 1993 / 0600

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



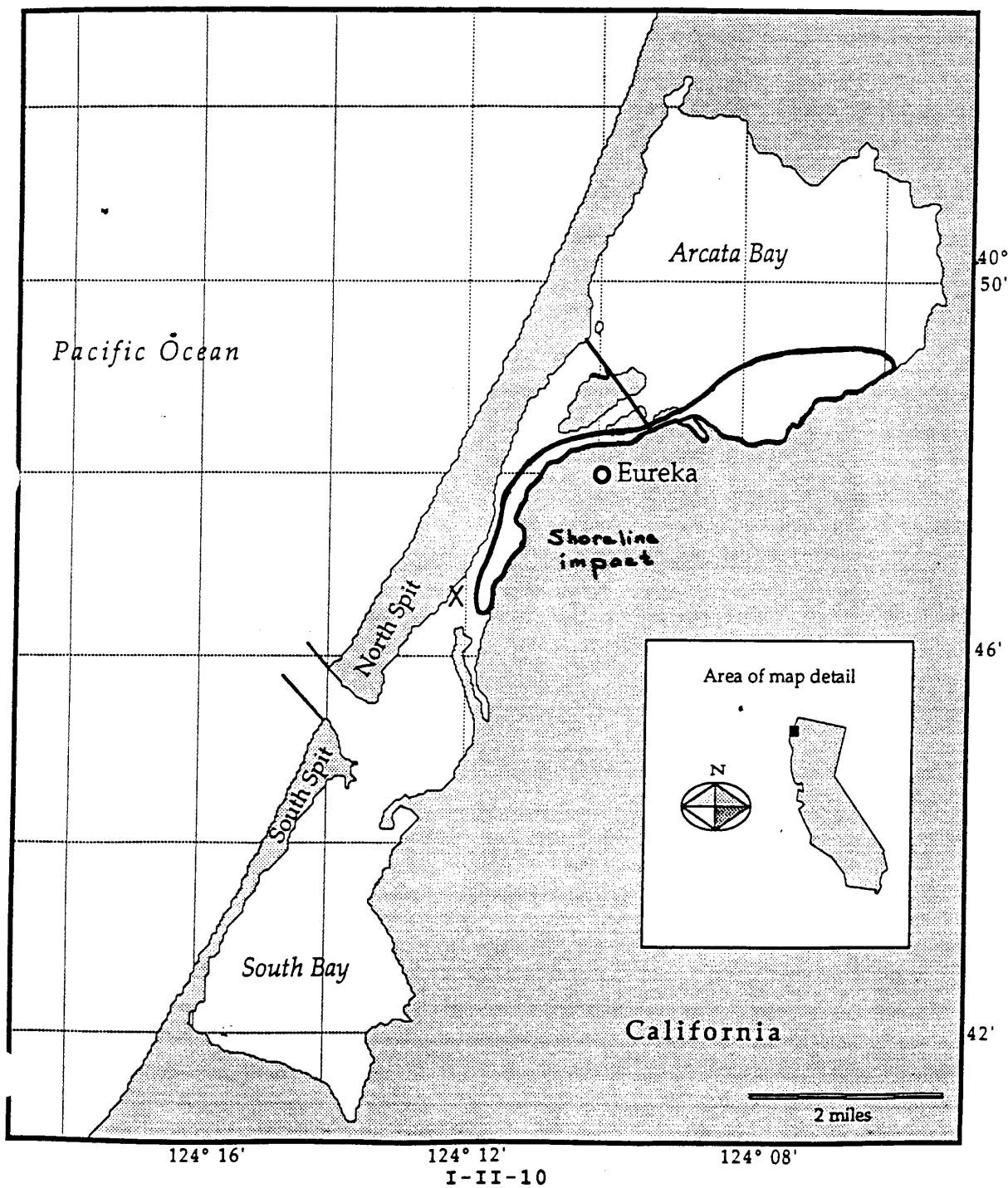
## Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 05 May 1993 / 1200

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



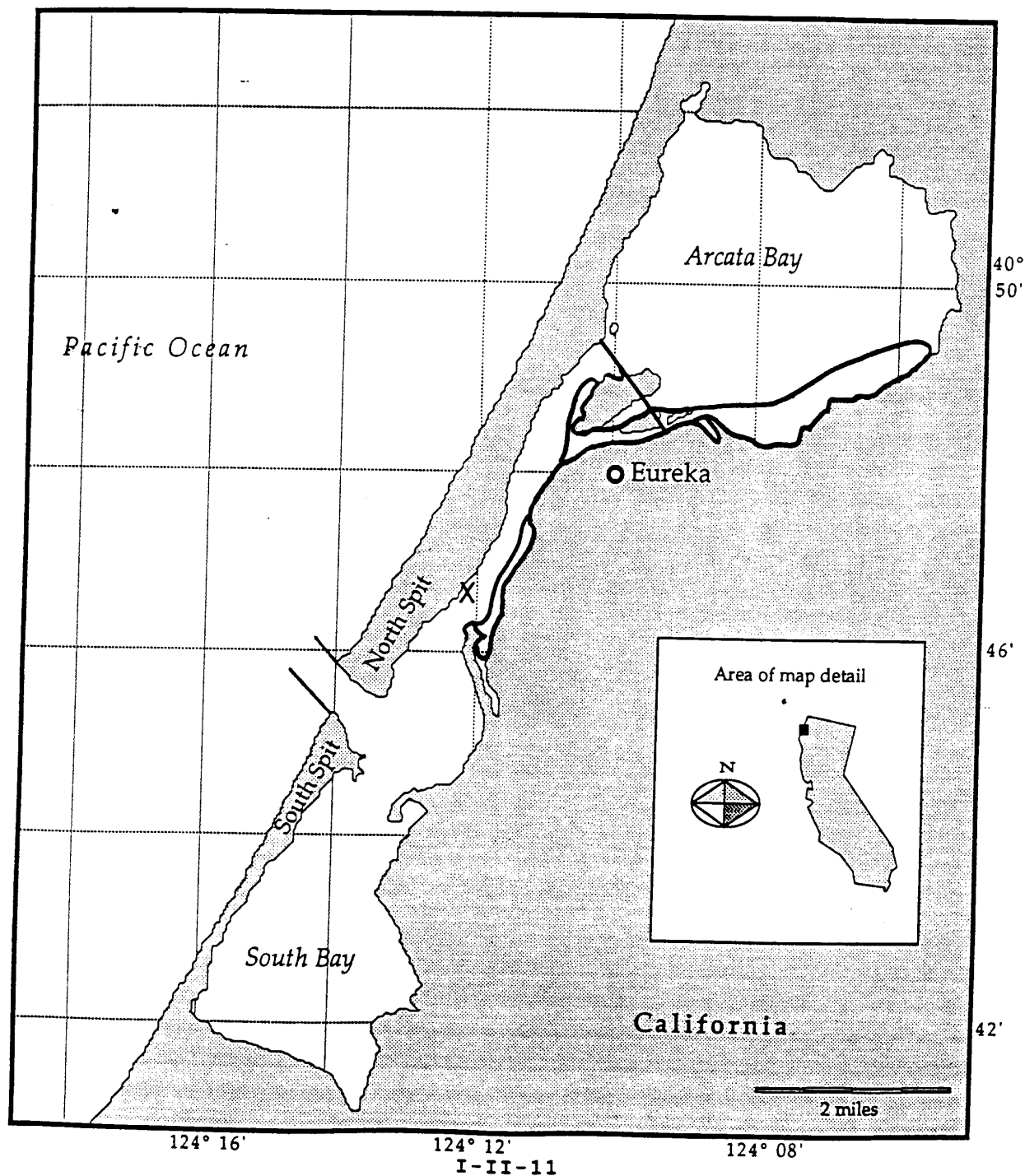
## Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 05 May 1993 / 1800

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



## Humboldt Bay Area Plan

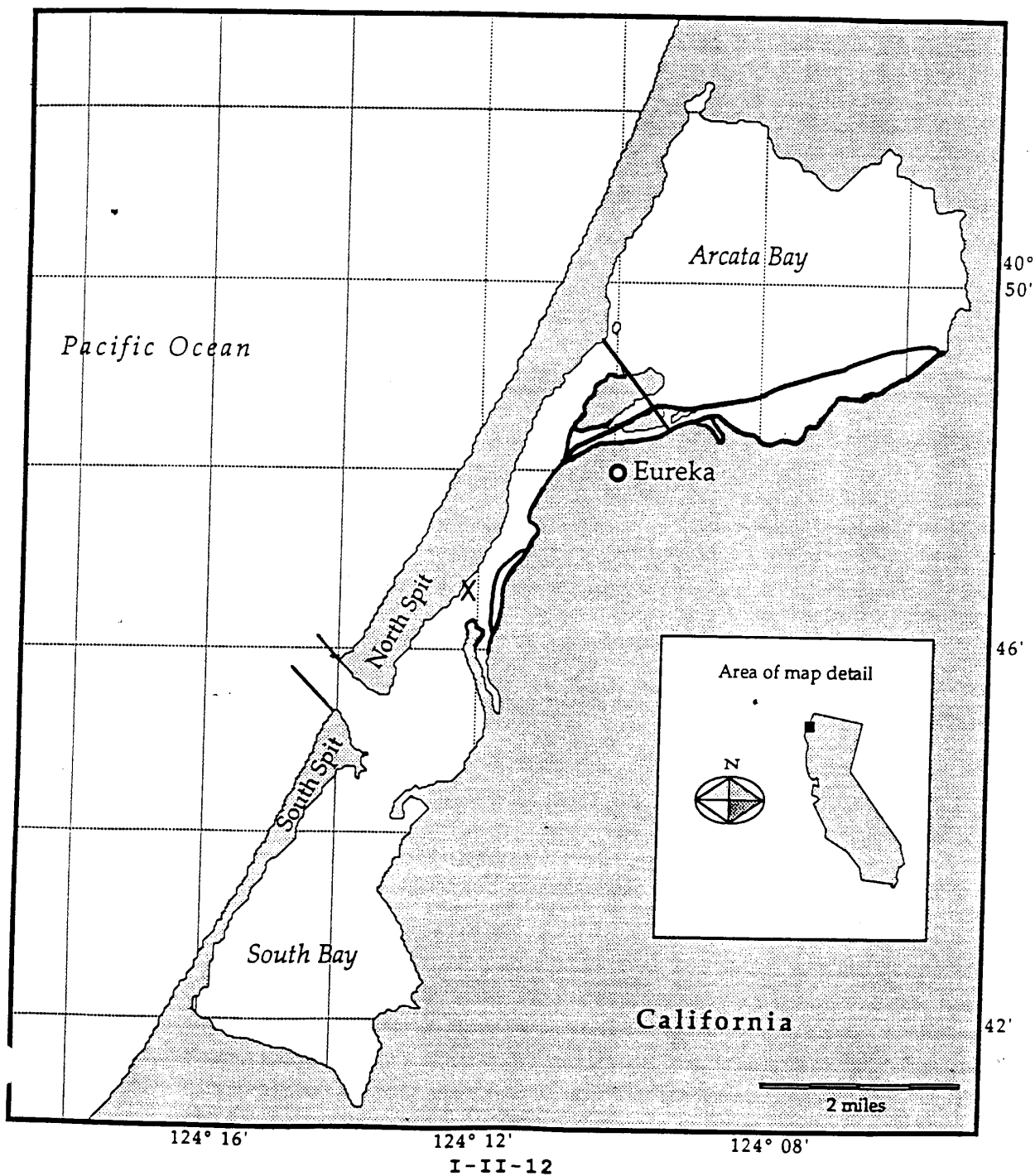
### Oil Spill Scenario Map (Bay)

prepared by NOAA

Date/Time: 06 May 1993/0000

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



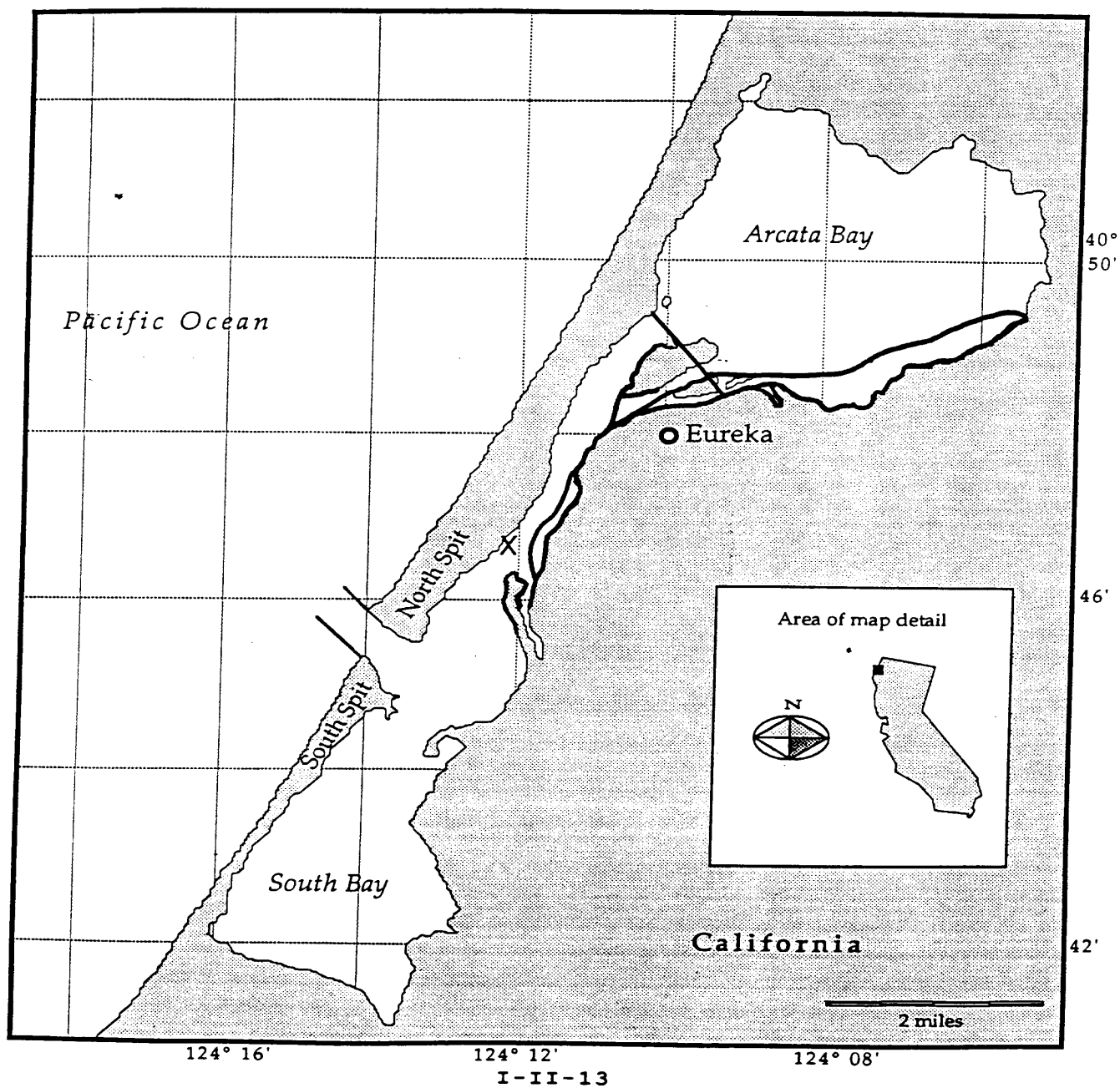
## Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 06 May 1993/0600

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE





## Humboldt Bay Area Plan

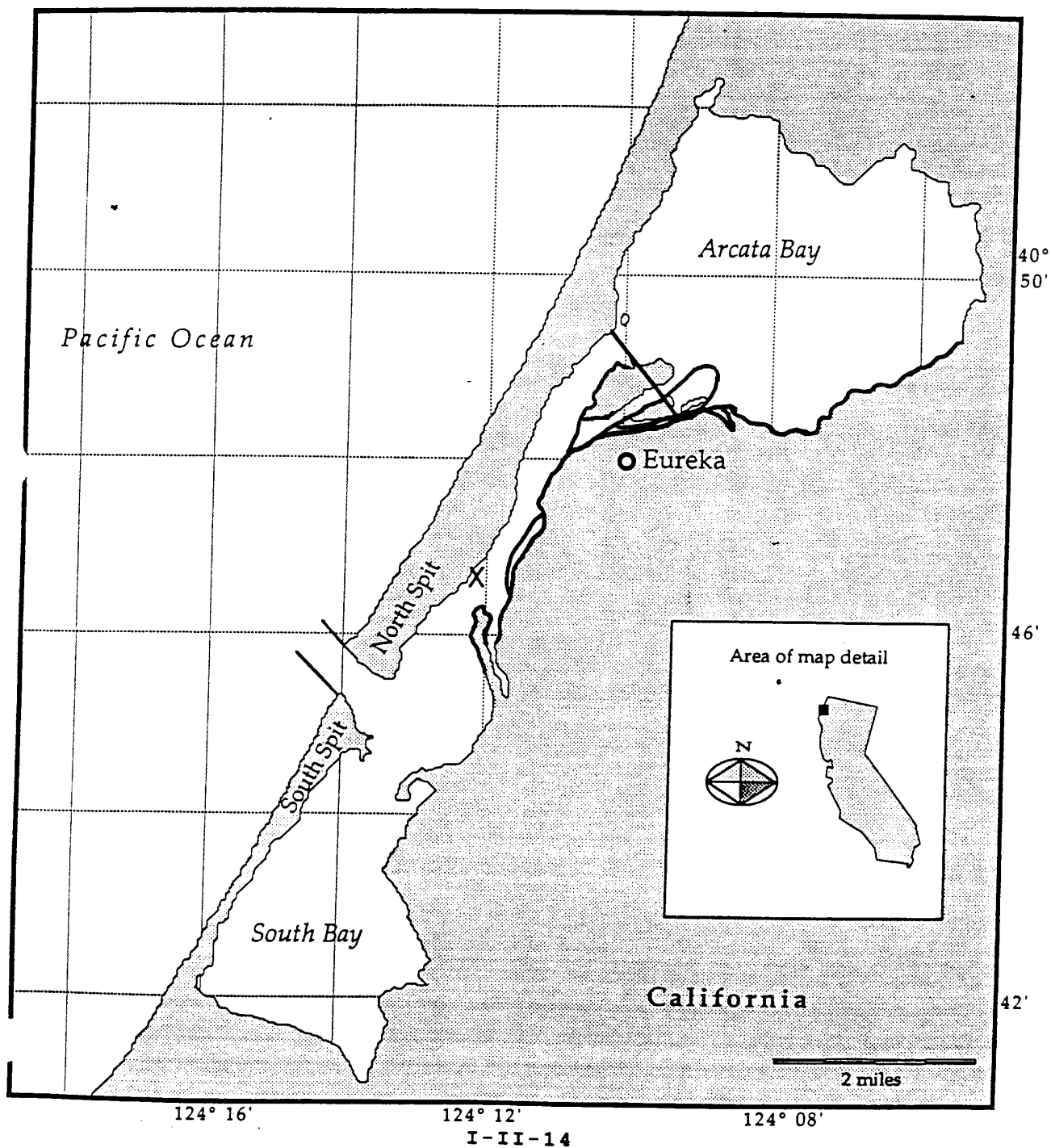
### Oil Spill Scenario Map (Bay)

prepared by NOAA

Date/Time: 06 May 1993 / 1200

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



## Humboldt Bay Area Plan

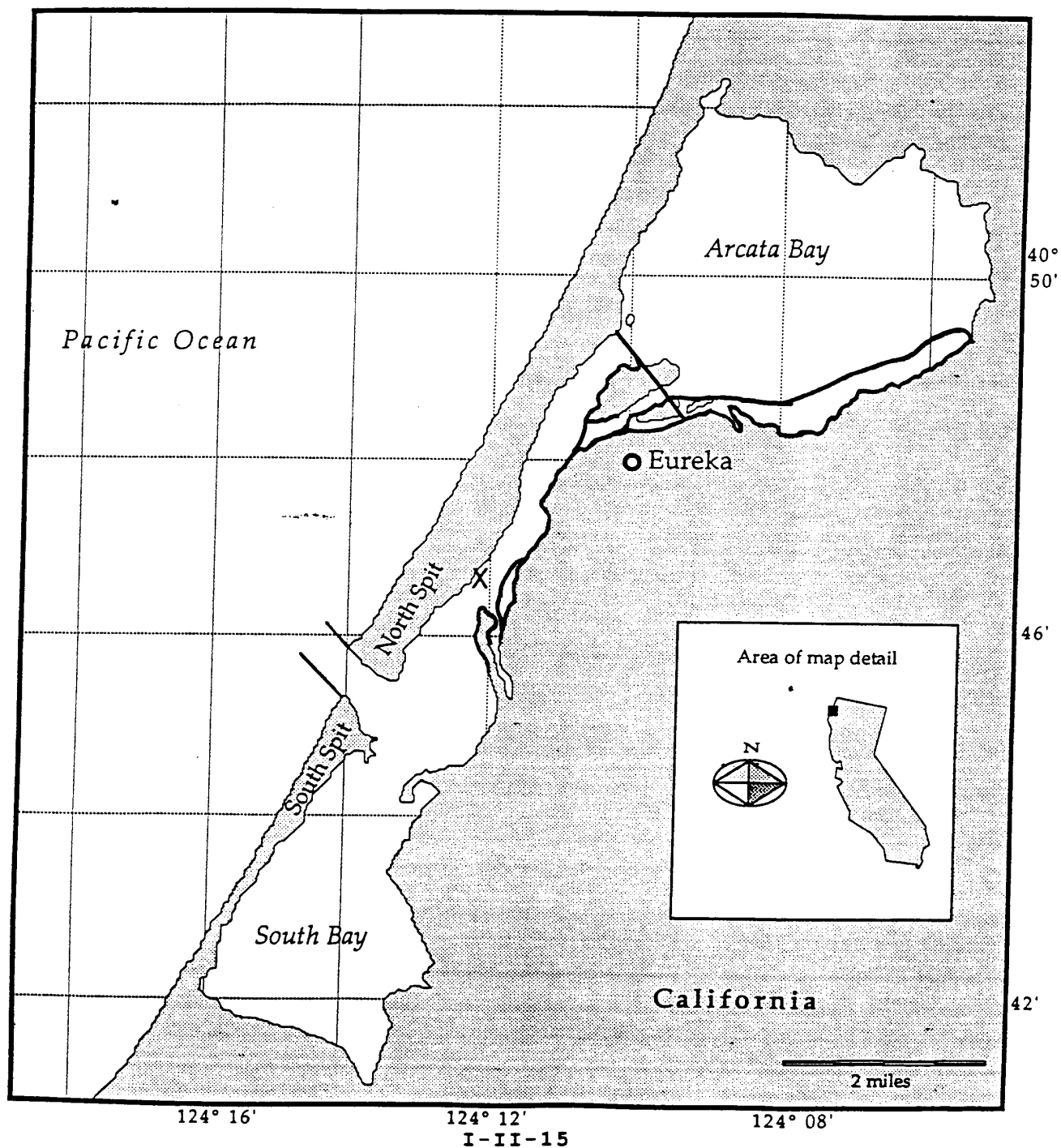
### Oil Spill Scenario Map (Bay)

prepared by NOAA

Date/Time: 06 May 1993 / 1800

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



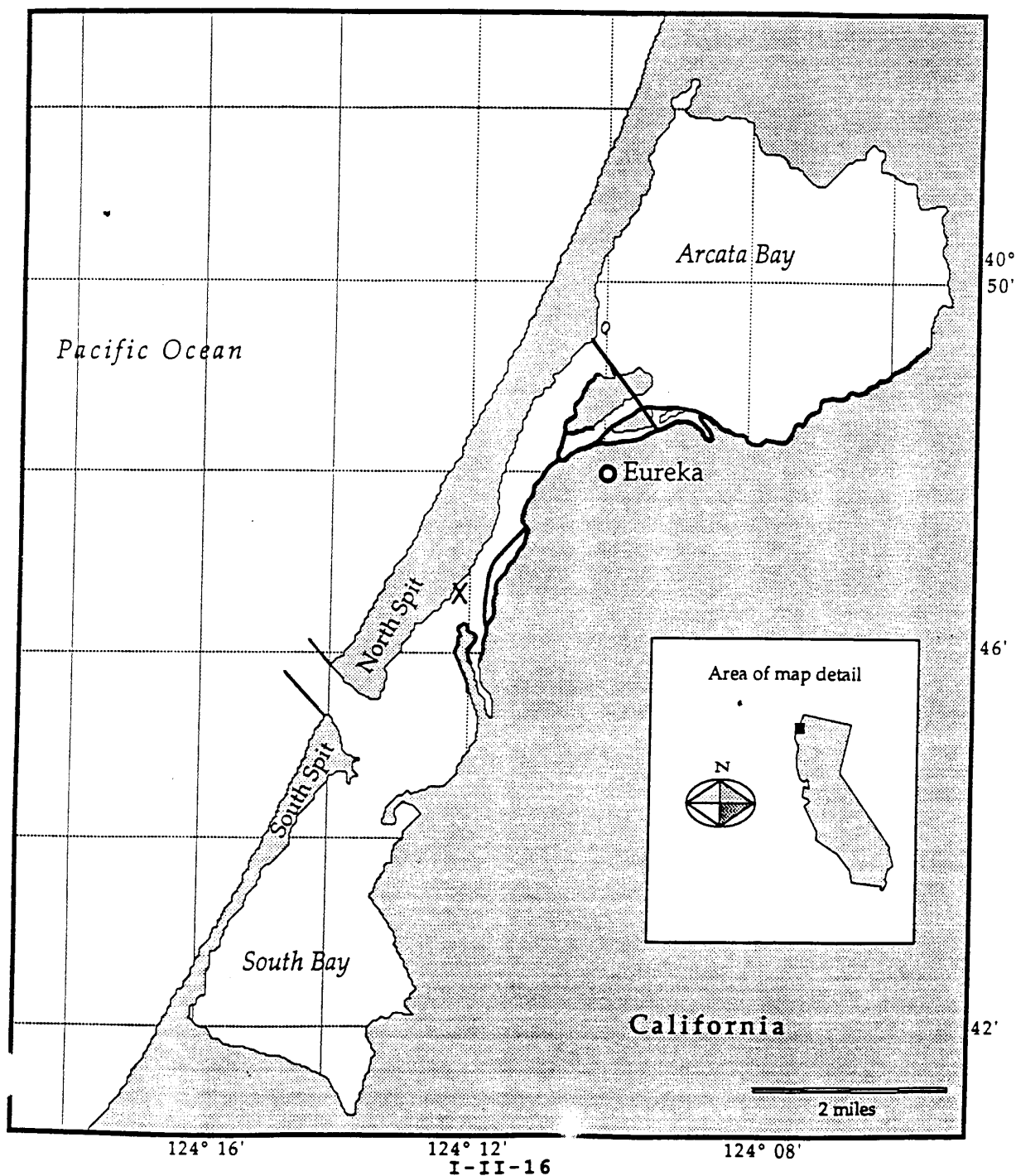
## Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 07 May 1993 / 0000

Product Spilled: 2,500 barrels, Fuel Oil  
No. 2 (Diesel)

USE ONLY AS A GENERAL REFERENCE



## **APPENDIX III WORST CASE DISCHARGE (NORTH COAST AREA)**

The worst case discharge scenario may be based on either of the following:

- (1) In the case of a vessel, a discharge of its entire cargo in adverse weather conditions or
- (2) in the case of a facility, the largest foreseeable discharge in adverse weather.

A worst case discharge involving a vessel must take into account the largest tank vessel that calls at the port selected. The vessel's route must then be examined to identify significant hazards and the potential areas to be impacted in the event of a spill. For facilities, the amount of cargo transferred and stored, as well as operating histories are significant.

Though the worst case discharge could involve either a vessel or facility, a scenario involving a vessel (tug and barge) has been selected. A vessel was deemed more appropriate for such a spill, due to the relative ease in securing a facility's discharge. A vessel scenario was also selected for the Spill of Maximum Impact scenario.

### **HISTORICAL SPILL CONSIDERATIONS**

There is no recent spill history on which to base a worst case scenario. However, the risk of such a spill does exist within this planning area and is developed for planning purposes.

### **HAZARD ASSESSMENT**

The largest tank vessels calling on Humboldt Bay, T/V Coast Range and T/V Sierra Madre, each have a maximum capacity of 296,000 barrels. However, due to the draft limitations imposed by the Humboldt Bay Channels, the tank vessels do not enter fully loaded. Since the Simpson lumber mill closed, the largest volume of cargo transported into Humboldt Bay has been 108,440 barrels. The average tank vessel cargo during this time has been 57,916 barrels. Tank vessels entering Humboldt Bay normally carry a variety of petroleum products at one time. Generally, the cargo includes gasoline, diesel and lube oil. Tank vessels rarely transport crude oil into Humboldt Bay.

Tank barges enter the bay with greater frequency and occasionally carry heavier crude oils. The largest tank barge carrying heavy oil has a capacity of 40,000 barrels. Due to the greater risk to the environment, the smaller, potentially more damaging tank barge laden with heavy oil was chosen for the worst case scenario.

The entrance to Humboldt Bay is protected by two rubble mound jetties. The jetties are approximately one half-mile apart and extend seaward from two narrow sand spits that separate the bay from the ocean. Making the turn from the approach to the entrance range is abrupt and difficult to make under certain conditions of wind, sea and current. Navigation in the entrance channel is often adversely affected by strong and variable tidal and non-tidal currents, rough seas, breaking waves, wind and fog. As such, the entrance channel was selected as the site for the worst case discharge.

### **VULNERABILITY ANALYSIS**

Most of the numerous environmentally sensitive sites throughout Humboldt Bay are at risk. These sites include wildlife refuges, sheltered tidal flats, salt marshes, commercial oyster beds and farmed wetlands. For a complete description of the environmentally sensitive and economically significant areas at risk, see Annex E.

### **SCENARIO: WORST CASE DISCHARGE**

**Situation:** While inbound en route to one of Humboldt Bay's marine oil transfer facilities, a tug and tank barge part wire. The barge, containing 40,000 barrels of Bunker C fuel oil, grounds and breaks up on the South Jetty. Several holes in the barge's hull allow the entire cargo to be discharged into the water on a flood tide.

The master of the tug reports the casualty to Coast Guard Station Humboldt Bay and the terminal manager via Channel 16. Station Humboldt Bay notifies Group Humboldt Bay, dispatches a small boat crew to assess the situation and restrict entry into the harbor, and issues an urgent marine broadcast.

**Location:** South Jetty, Humboldt Bay entrance: 40-46 N, 124-14 W.

**Amount:** 40,000 barrels

**Securing Source:** The source is unable to be secured prior to discharging the barge's entire cargo.

**Areas at Risk:** All of Humboldt Bay and some coastline outside of the bay are at risk. Wind, tide and the hydrodynamics within Humboldt Bay will likely carry the spill toward the North Bay (Arcata Bay) and South Bay. Each of the Humboldt Bay environmentally sensitive and economically significant sites identified in Annex E are at risk.

**Time of Year:** early-February

**Weather:** Cloudy

Wind: 25 knots. SW to W.

Visibility: 3/4 mi.

Seas: 3-5 ft.

Current: Max Flood

## **INITIAL ACTIONS**

### **NOTIFICATION**

After receiving word of the mishap from Station Humboldt Bay, key notifications are made to NRC, State OES, and Coast Guard Marine Safety Office (MSO) San Francisco Bay by Coast Guard Group Humboldt Bay. The Group also dispatches the MSO liaison assigned to the Group and notifies the local Office of Oil Spill Prevention and Response (OSPR) warden.

The MSO initiates a recall of MSO personnel and notifies the Humboldt Bay Response Organization (formerly Pacific Affiliates), MSRC, the Eleventh Coast Guard District Office and Coast Guard Pacific Strike Team. For a spill of this magnitude, the MSO would undoubtedly alert Clean Bay despite the fact that the company's operating area extends only to Fort Bragg.

State OES carries out required notifications including OSPR

Headquarters in Sacramento and Humboldt County Sheriff's Dispatch Center (the county's designated local emergency contact).

As shown in Annex J, Tab A , numerous other notifications are carried out.

### **ACTIVATION OF RESPONSE**

The tug and barge personnel initiate action in accordance with their emergency response procedures. The initial concern, after safety of life, is to stabilize the barge if possible. Additional tugs are called to assist as needed. Sea state and current in the entrance channel will most likely limit the effectiveness of containment booming around the barge.

The MSO's liaison arrives on scene within 30 minutes. The local OSPR warden and a Humboldt Bay Response Corporation representative also arrive on scene within 30 minutes to assess the situation. These individuals, in

conjunction with the master of the tug or another Responsible Party representative, meet to develop immediate strategies and priorities (taking into consideration wind and sea state) to minimize the spread of oil. The local OSPR Biologist is called to assist with this prioritization.

The MSO coordinates a flight of 2-3 command representatives to the scene via CG helo from AIRSTA San Francisco. However, these personnel will not be on scene for 2-4 hours. The MSO's Command Duty Officer (CDO) and watchstander also issue a Broadcast Notice to Mariners, establishes a safety zone to prevent vessel traffic from transiting the area, and opens the Oil Spill Liability Trust Fund (OSLTF) requesting an initial ceiling of \$500,000. The safety zone is enforced by CG Station Humboldt Bay.

The pre-loaded equipment from Humboldt Bay Response Corporation is transported to the site via tractor trailers and/or small boats launched from the City of Eureka boat launch (east side of Route 255 bridge) or the Fields Landing launch ramp. These personnel and equipment arrive on scene within 1.5 hours of notification to carry out the strategies communicated from the Unified Command.

The three Palco Marsh culverts north of the Chevron facility should be closed immediately to prevent oiling of sensitive marshlands. These culverts currently have no floodgates; therefore, they must be manually blocked using sandbags, sediment or rocks. Exclusionary booming should also be performed at each of these culverts and at Elk River (see Annex E, sites A-1-037 and A-1-038).

Preventing oil from entering the North Bay (Arcata Bay) and South Bay should be given a very high priority. Not only are these areas extremely sensitive, but they are comprised of shallow water and mud flats, which significantly reduce the ability to respond. Deflection booming could be implemented at locations south of Woodley Island, south of Indian Island, and along the Eureka waterfront to deflect product toward various collection sites south of Arcata Bay. Due to natural pooling in the area, the southwestern tip of Woodley Island should receive consideration as a site to collect and skim recovered product. Additional collection and skimming sites in this area might include the Louisiana Pacific and Simpson docks along the Samoa Peninsula. Deflection booming nearer the South Bay could be established near King Salmon and the South Jetty with collection sites nearby. These recommended strategies are further detailed in Annex E, sites A-1-035, A-1-036, and A-1-040).

As much skimming and protective booming as possible is completed during the night with available boom. At first light, a CG Group Humboldt Bay helicopter conducts an overflight with CG, State of California and Responsible Party representatives aboard. Planning for any adjustments to the initial response strategies occurs immediately.

Personnel and equipment are requested from each of the Humboldt Bay facilities. Additional response personnel and equipment are requested from Clean Bay and Marine Spill Response Corporation (MSRC), Coast Guard Group and Station Humboldt Bay, local fisherman's organization and California Conservation Corps, as a spill of this magnitude will easily overwhelm Humboldt Bay Response Organization resources. Nearby facilities could have their personnel and equipment on scene within 1.5 hours of notification. Local CG personnel and equipment could arrive within 2 hours of notification. Trained response personnel from California Conservation Corps could arrive within 2 hours of notification. Personnel and equipment from the Pacific Strike Team and MSRC are dispatched via truck to arrive in approximately 5-7 hours. MSRC's PACIFIC RESPONDER are en route with an estimated arrival time of 24 hours. Local fishing vessels capable of deploying MSRC or CG VOSS systems are outfitted with a VOSS and ready to be deployed within 5 hours.

Additional MSO personnel are dispatched via commercial airline the next morning. Trajectories are requested from the NOAA Scientific Support Coordinator. Data gathering and consideration of alternate response technologies is initiated. Protective booming continues through the night. CG Group Humboldt Bay launches helicopter at first light with FOOSC, OSPR and RP representative on board. The spill has moved inside the bay and impacted shoreline in several areas. Planning immediately prioritizes the first day operations and directs equipment to the highest priority locations. Open water recovery is initiated along with additional protective booming.

## **RESPONSE ORGANIZATION**

Over several hours, the response organization will evolve into the fully-staffed Unified Command System discussed in Annex B. During the initial stages of the spill, though, the MSO liaison will assume the role of Federal On-scene Coordinator (FOSC) and the local OSPR warden will assume the role of State On-scene Coordinator (SOSC). The Responsible Party (RP) Incident Commander would likely be the master of the tug or a company representative. During these preliminary stages of the response, only the Operations section of the Unified Command System (UCS) will be staffed. This section will be comprised almost entirely of Humboldt Bay Response Corporation personnel.

As personnel from federal, state and local governmental agencies, the Responsible Party's organization, and response outfits arrive, a complete UCS will develop. An individual from the CG MSO, OSPR Headquarters, and the Responsible Party's corporate Spill Management Team will take over the roles of FOSC, SOSC and RP Incident Commander respectively.

A command center could be established at one of the sites identified in Annex F.

## **CONTAINMENT, COUNTERMEASURES, AND CLEANUP STRATEGIES**

Prior to implementing any cleanup operations the Federal On-Scene Coordinator ensures that personnel involved have the appropriate level of training and are using proper personnel protective equipment.

Containment is accomplished by implementing the booming strategies discussed above. The goals of containment are to hold and recover the spilled product to minimize shoreline impact. Since this spill is within the bay, it is decided not to use dispersants or in-situ burning. Limited applications of certain dispersants are considered for application outside the bay, however. The open-water recovery is accomplished by skimmers and sorbents. The Pacific Strike Team may deploy the Coast Guard On-water Containment and Recovery System (OWCRS) for skimming operations within Humboldt Bay, if appropriate towing vessels are available and if water depths permit. One difficulty encountered in open water recovery is the shallowness of certain areas in the bay, which are often left exposed at low tide. Considering that more severe damage may result, the Unified Command should decide to what extent any impacted marshlands will be cleaned. If shoreline cleanup is necessary, it will involve the usual raking and shoveling of debris and product.

Outside the bay a combination of skimming vessels including the vessel of opportunity skimming systems (VOSS'), MSRC's PACIFIC RESPONDER and Clean Bay's vessels are used for large scale recovery.

## **RESOURCES REQUIRED AND SHORTFALLS**

Resources required for this spill include several thousand (30,000+) feet of containment, intertidal and sorbent boom. The quantity of boom required is not immediately available in the area. As such, additional equipment from Clean Bay, MSRC and other response organizations will have to be cascaded in. A minimum of ten small boats with a two personnel per boat crew will be necessary to deploy the boom. In addition, 15-30 skimmers, several storage bladders and 8-10 vacuum trucks will be required.

Response shortfalls are addressed at the end of this annex.

## **ESTIMATED TIME TO CLEANUP THE SPILL**

The cleanup involved for this spill would be extensive. Open water recovery can be expected to take 2-3 weeks with beach cleanup taking several months longer, approximately 5-6. Full restoration is expected to take years.

Northern California  
Area Plan  
Oil Spill Trajectory Model Notes

WORST CASE DISCHARGE

Model Limitations and Caveats

For the Area Plan oil spill scenarios a combination of user-specified and statistical winds are often used. The user-specified winds can be fine tuned to some degree to imitate an actual storm event. However, the statistical winds used in the model are based on wind histograms taken from the U.S. Navy Marine Climatic Atlas. Using the histogram data, the model generates a simulation of it that is random, but has the same statistical distribution. It must be understood, however, that using statistical wind patterns in a scenario gives an illustration of what areas could possibly be impacted, not what areas will be impacted. Also, statistical winds do not take into account local topographic-induced effects that could significantly alter wind patterns.

For offshore areas, the current patterns are based on average seasonal conditions. Current perturbations from wind events, shelf waves, and eddy events are not predictable and therefore not included in the model. Similarly, local small scale phenomena, such as eddies off spits or in rivers and local convergences or divergences are not modeled.

Tidal information is based on NOS Tide Tables and does not reflect short term episodic events such as heavy runoff from floods or storm surges.

For large spills of the type being modeled for these scenarios secondary sources of oil, such as refloating of oil from the shoreline, can be a significant problem. While the model does allow the oil to refloat the details are not exact.

The model does not account for oil that picks up sediment and sinks. This occurs in high sediment rivers and along high energy sand beaches.

Finally, and most important, moderate to large sized spills of a heavy oil (e.g., Bunker C or heavy crudes) will persist for weeks or months after the initial spill event. Depending on local wind and current conditions, these spills can impact shoreline several hundred miles downstream from the source. For these scenarios, even though the model is run for only one week and for one specific area does not mean that there will not be impacts felt far afield.

Additional Notes

The model was run for 72 hours (2/3 - 2/6/92) using the following scenario:

A towed barge containing 40,000 barrels of Bunker C oil (bound for the power plant) was inbound into Humboldt Bay. The barge ended up on the south jetty of the entrance to the bay and before it could be pulled off it lost its entire cargo.



SE winds (30 knots with higher gusts) were blowing in advance of strong cold front at the time of the spill. These winds continued to blow for 24 hours until the frontal passage. The winds began to diminish at this point and shift to the W and NW at 20 knots. The winds continued to blow from the NW for the remainder of the model run.

NOTE: User-specified winds were the only winds used for this scenario. Due to the short duration of the scenario (72 hours) no statistical winds were used. This particular weather scenario was chosen because it provide a realistic wind pattern for this particular area during the winter season (reference: John Henderson, Marine Forecaster, National Weather Service, Long Beach, California).

The product spilled was 40,000 barrels of Bunker C fuel oil.

The time of the spill (0600 hr's on 2/3/92) was chosen to occur during a flood tide cycle.

Shorelines were coded so that the oil would not "stick" but would refloat after each tidal cycle. This allows more oil to move with tidal action and provide a more widespread impact. This procedure is used to enhance the "worst-case" scenario.

The model indicates that any remaining floating oil will be taken out to sea during the first ebb tide after the spill. However, the winds were such that the heavy oiling along the western shore of North Bay Channel from the southern end of North Spit to Samoa will remain along the shore. Once the winds changed direction (from SE to W to NW) the oil spread onto the eastern shore and was taken out to sea on subsequent ebb tides. Towards the end of the scenario the exact movement of the oil in Humboldt Bay was unclear especially through the bay entrance.

The model indicated little or no impact in South Bay due to the strong southerly winds used in the model. Oiling in Arcata Bay, to the north, was relatively minor, according to the model, because most of the oil beached along the western side of North Bay Channel.

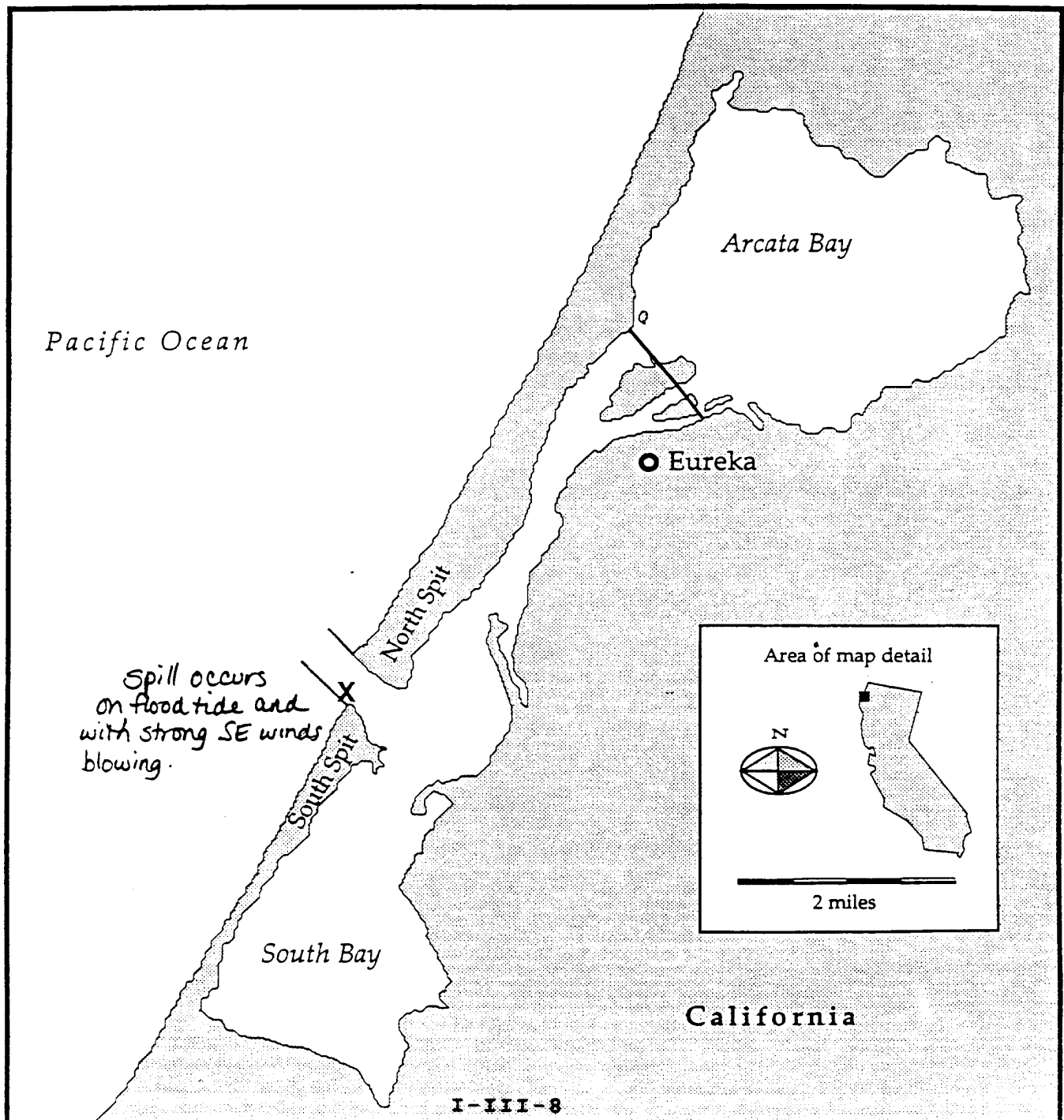
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 3 Feb. 1992 0600

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



# Humboldt Bay Area Plan

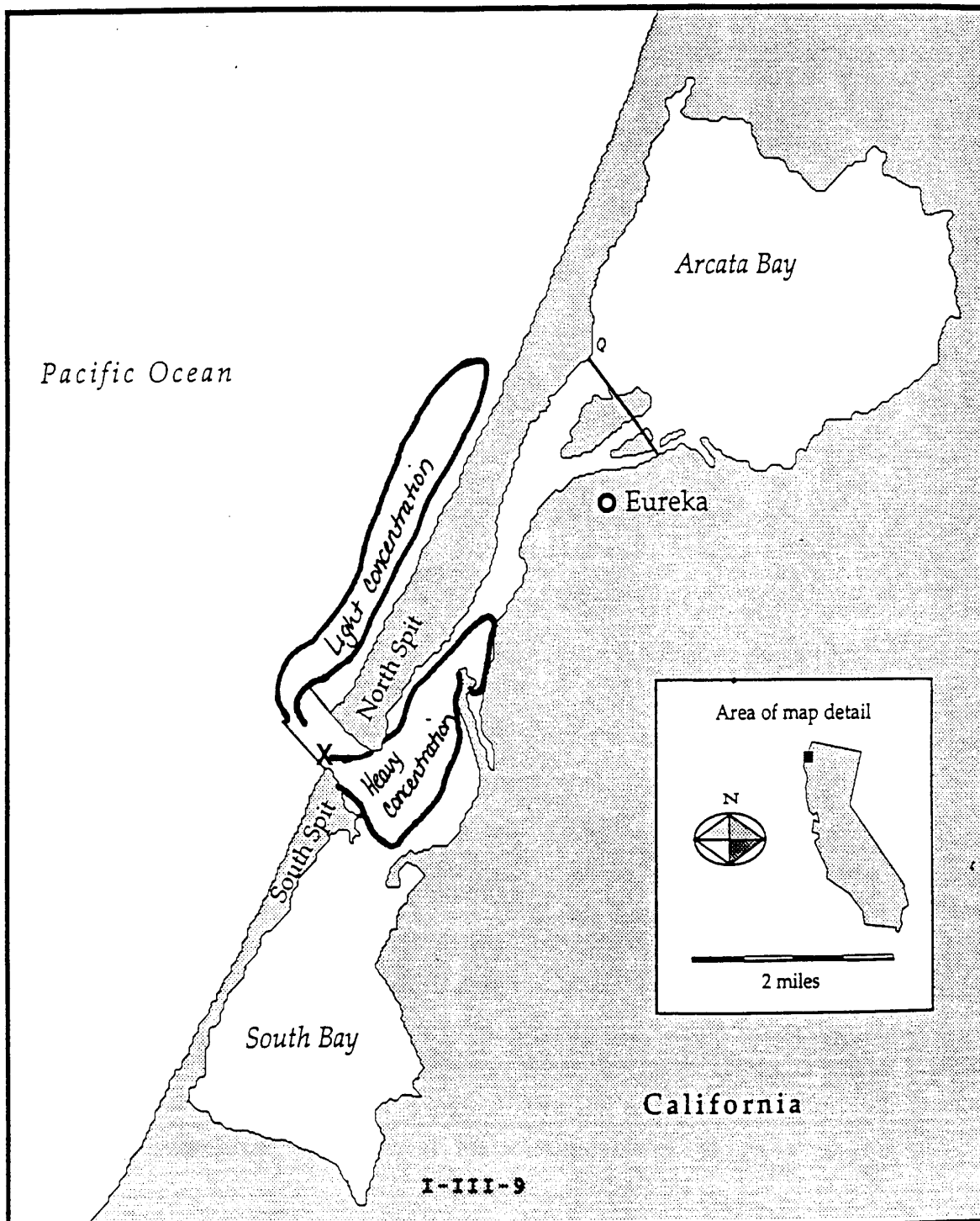
Oil Spill Scenario Map (Bay)

prepared by NOAA

Date/Time: 3 Feb. 1992 0900

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



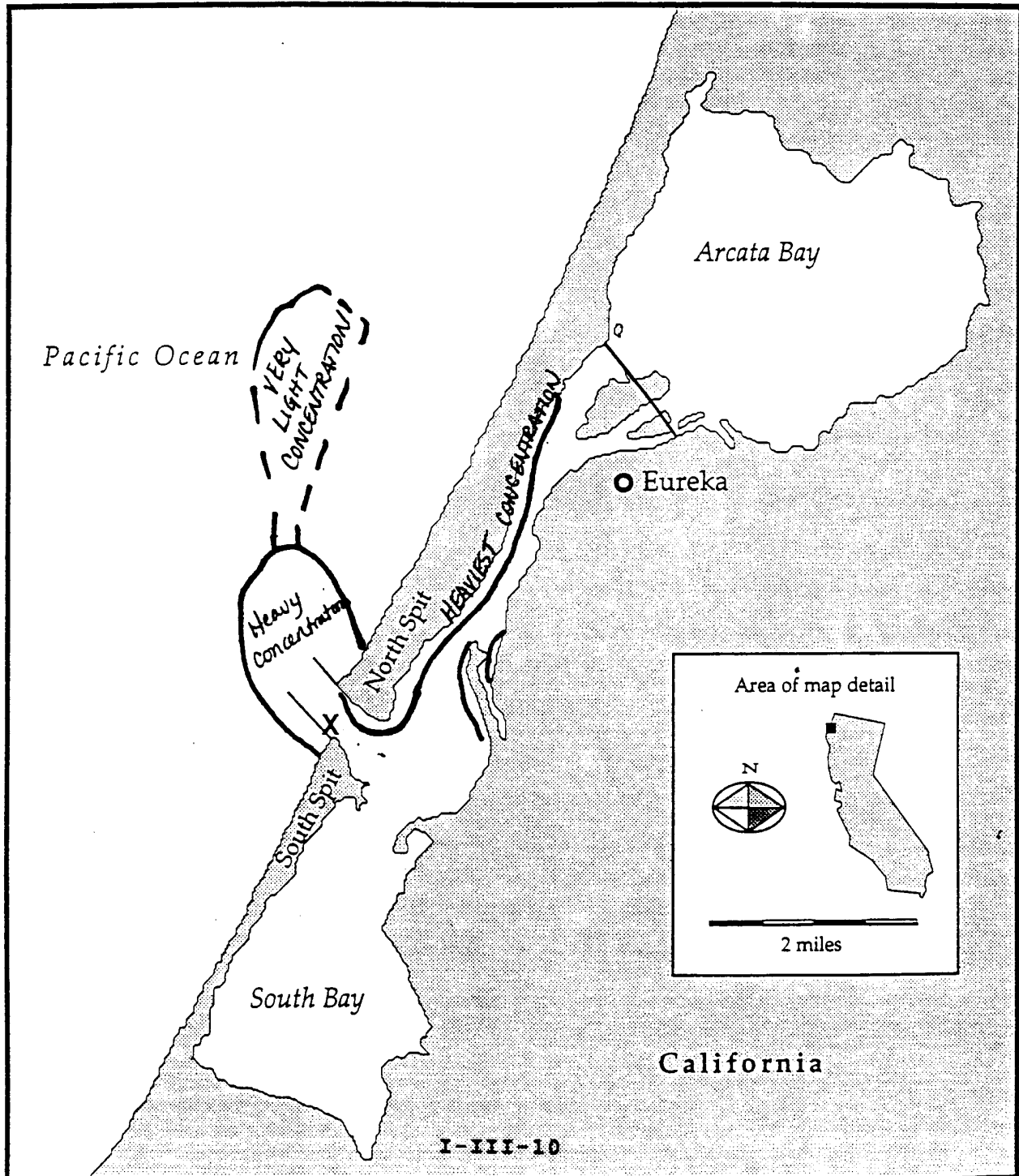
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Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 3 Feb. 1992 1200

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



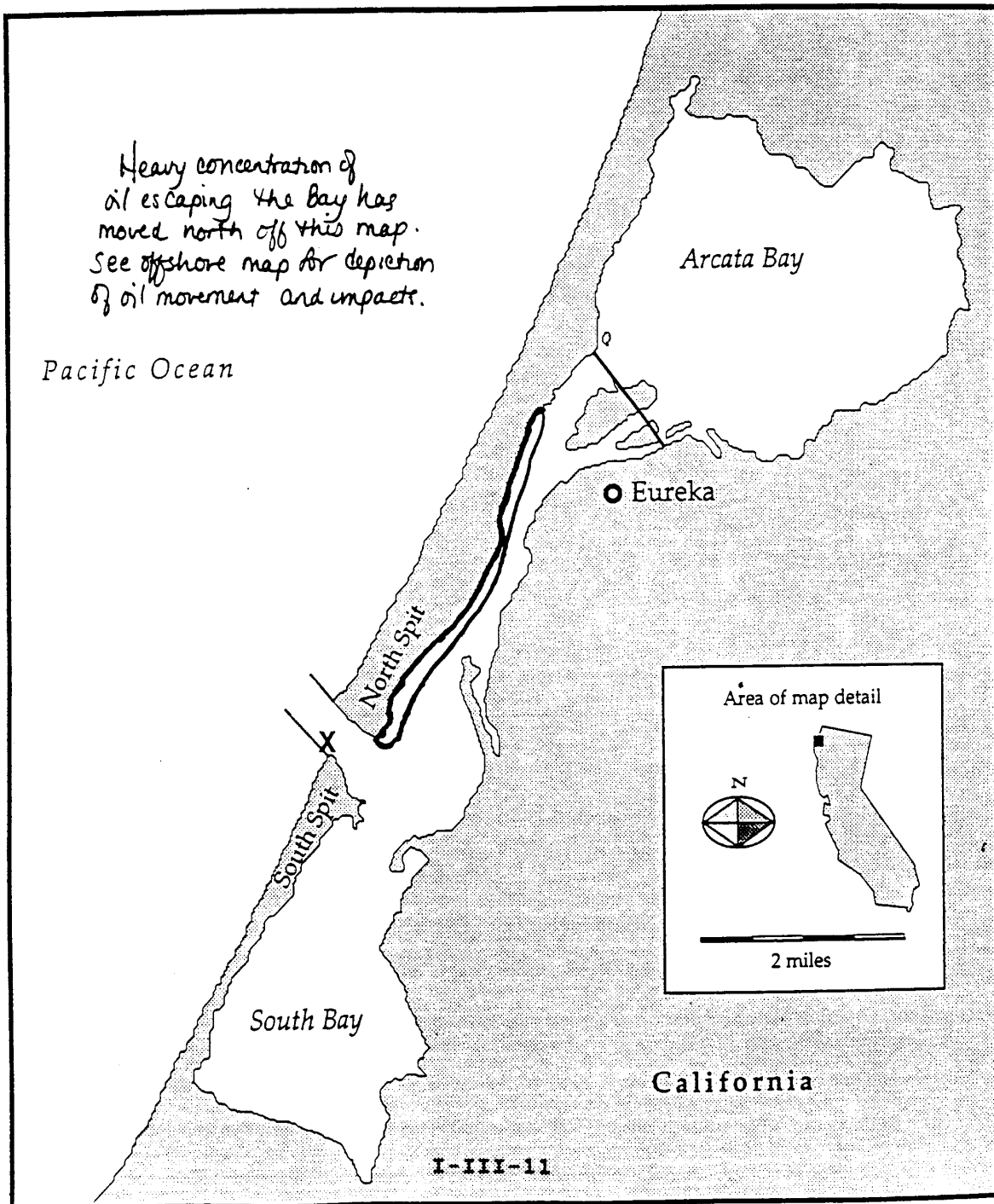
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 3 Feb. 1992 1800

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



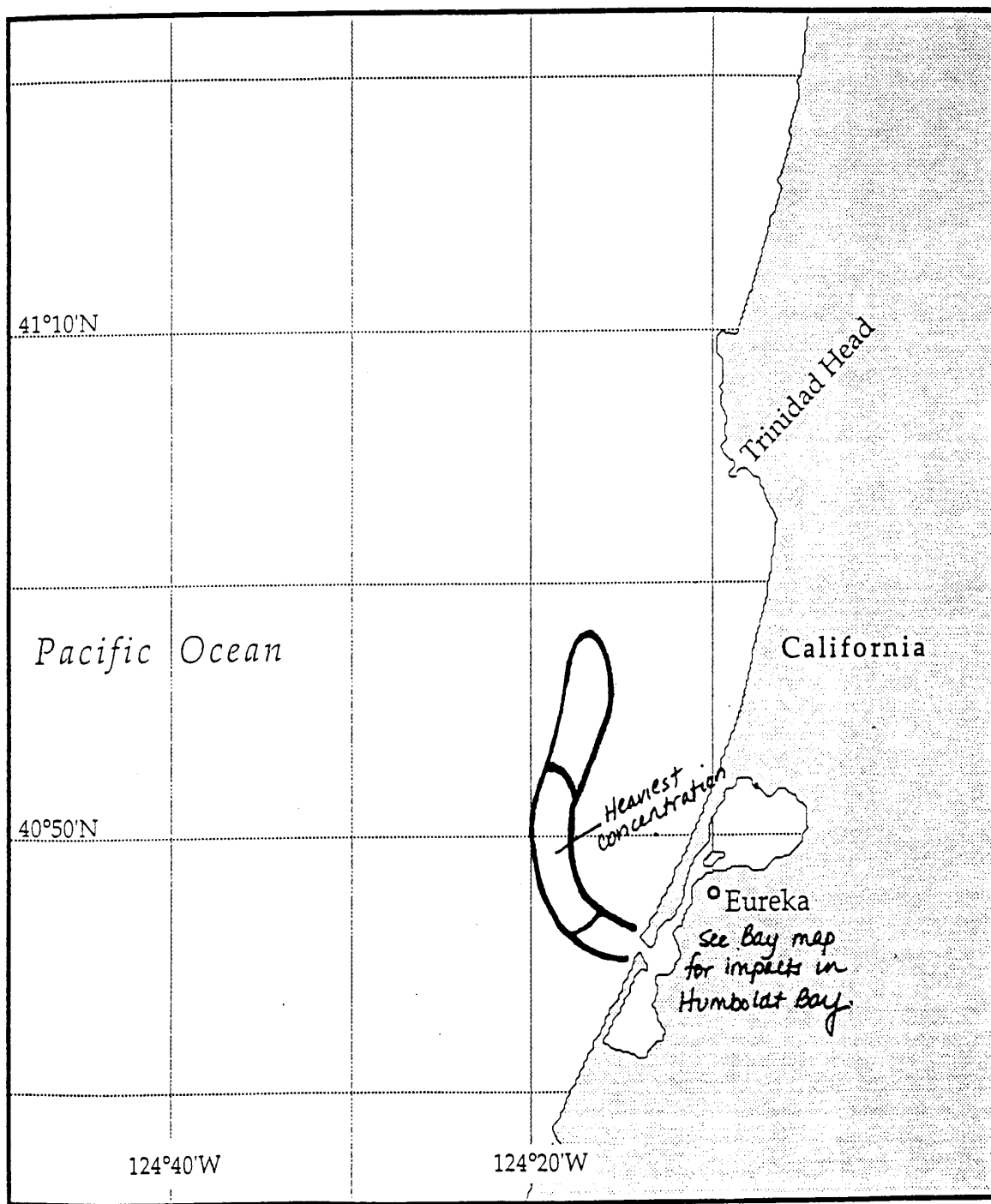
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Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 3 Feb. 1992 1800

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



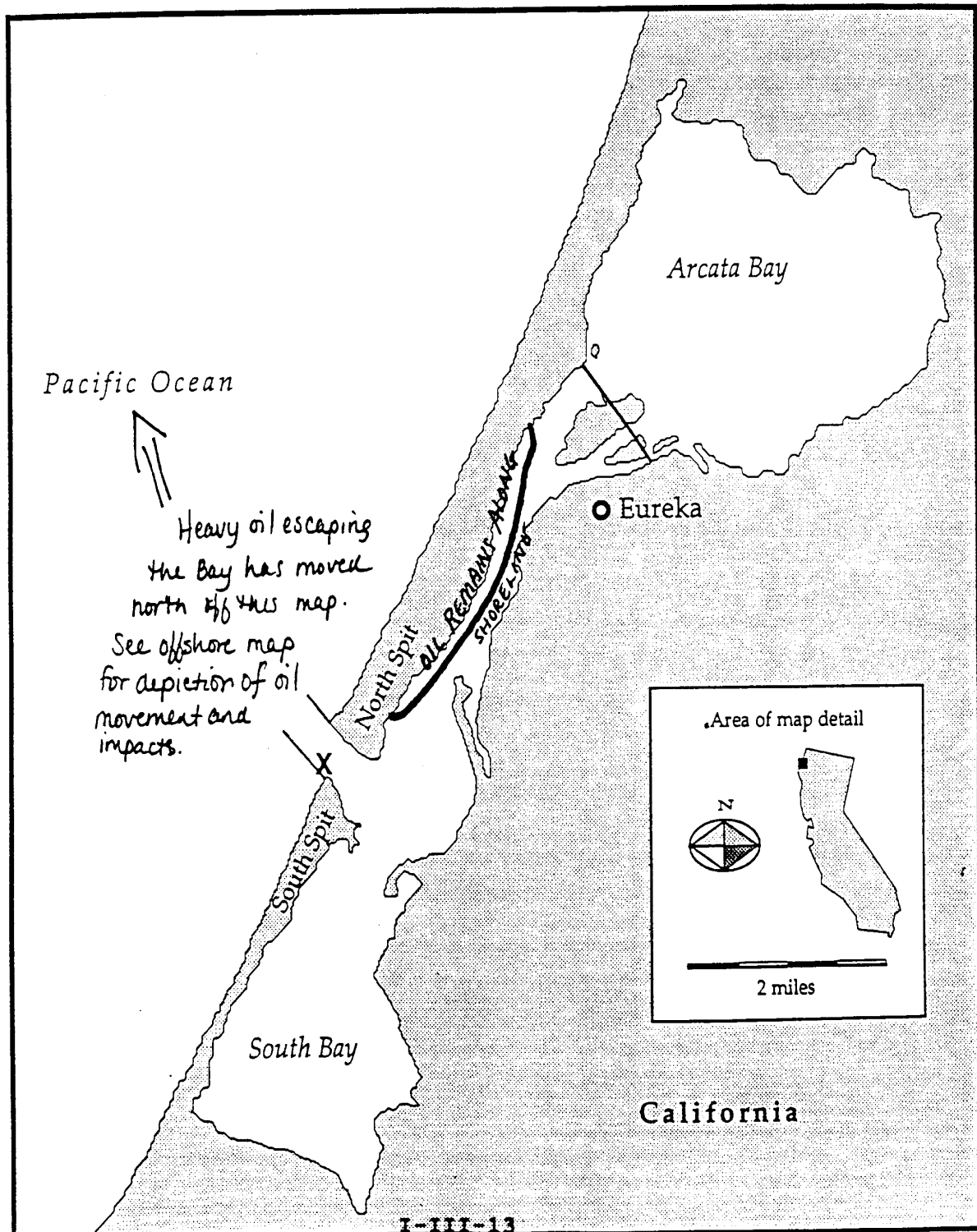
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 4 Feb. 1992 0000

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



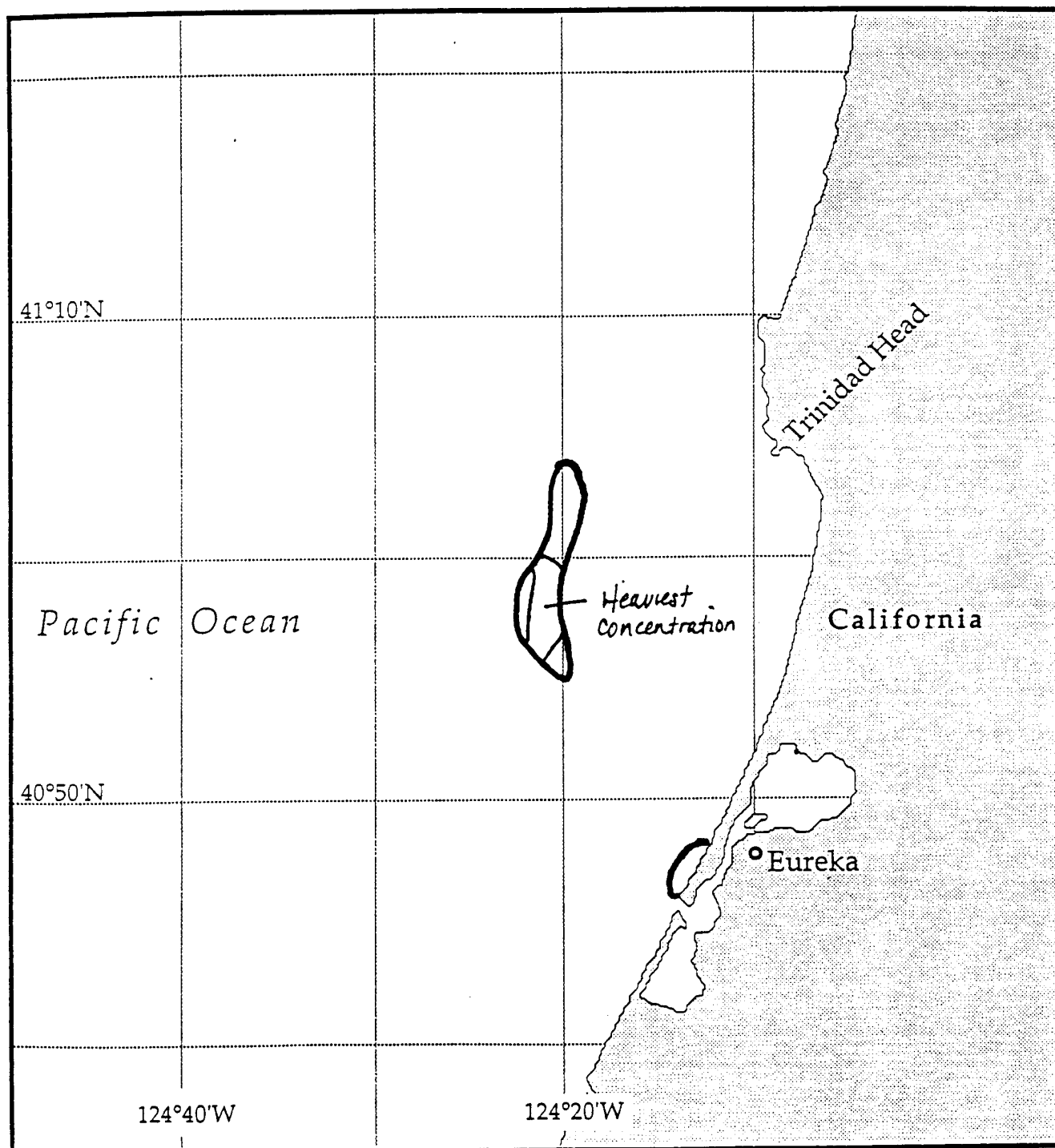
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Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 4 Feb. 1992 0000

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

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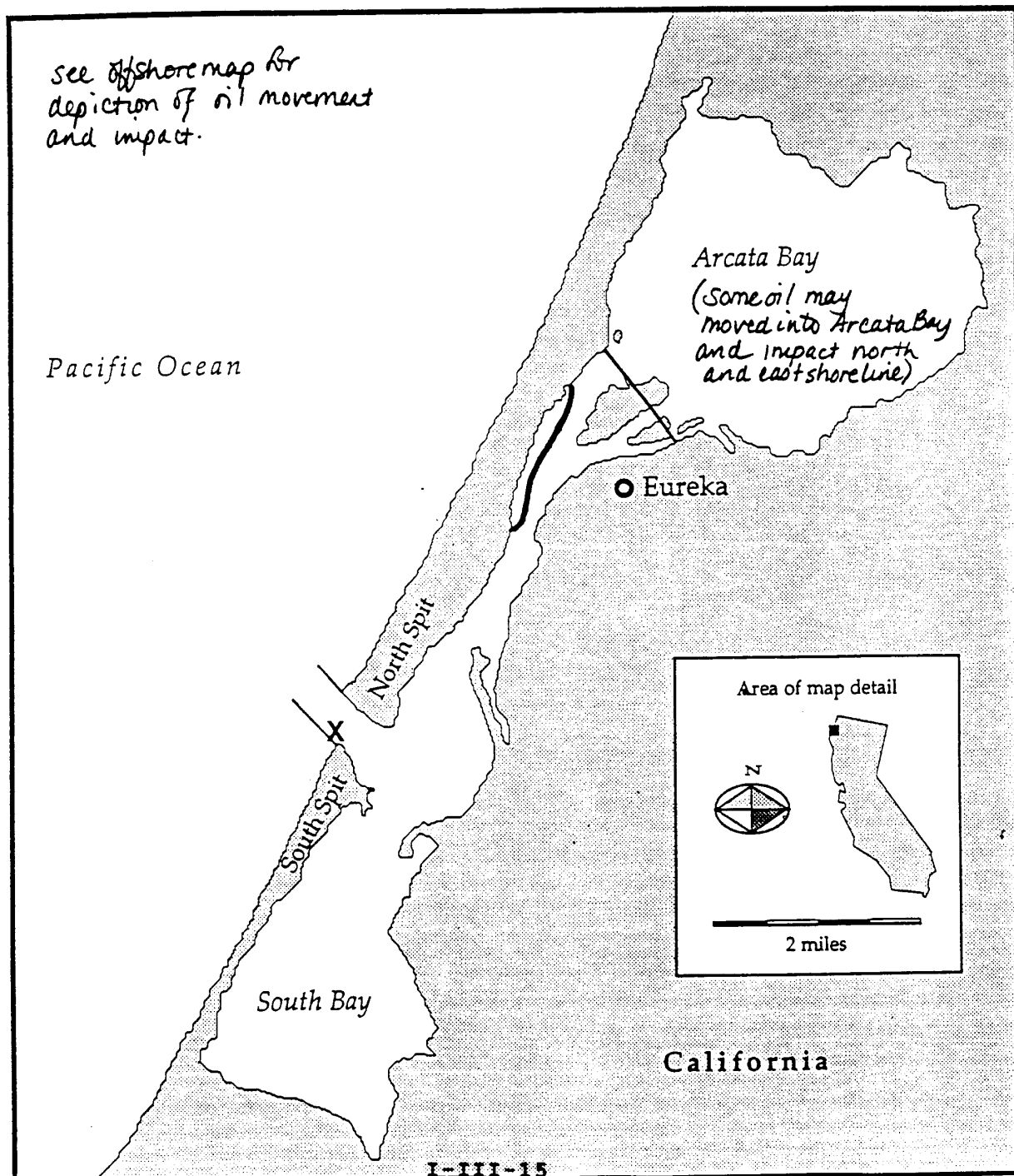
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Oil Spill Scenario Map (Bay)  
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Date/Time: 4 Feb. 1992 0600

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



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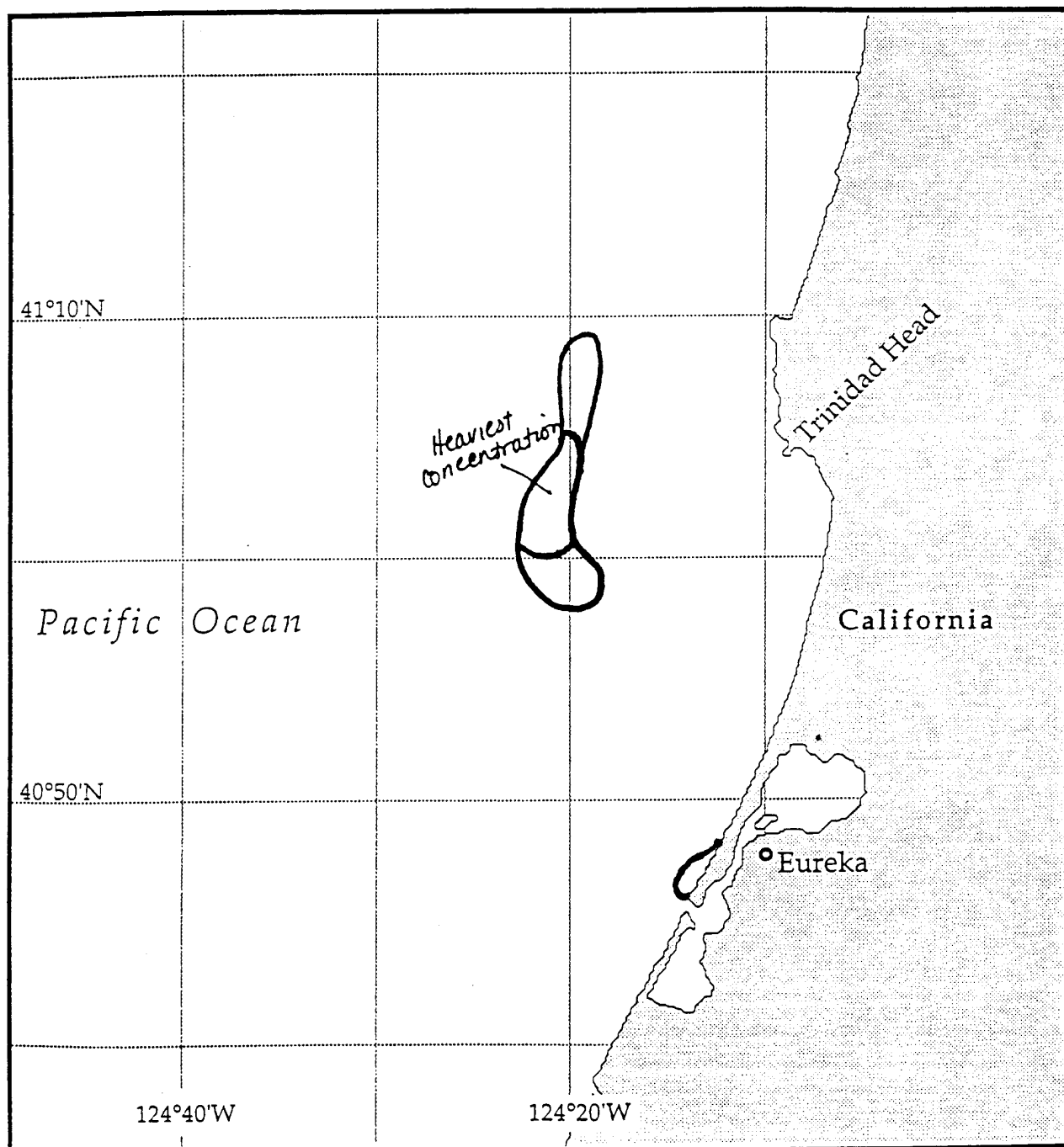
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Oil Spill Scenario Map (Offshore)  
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Date/Time: 4 Feb. 1992 0600

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

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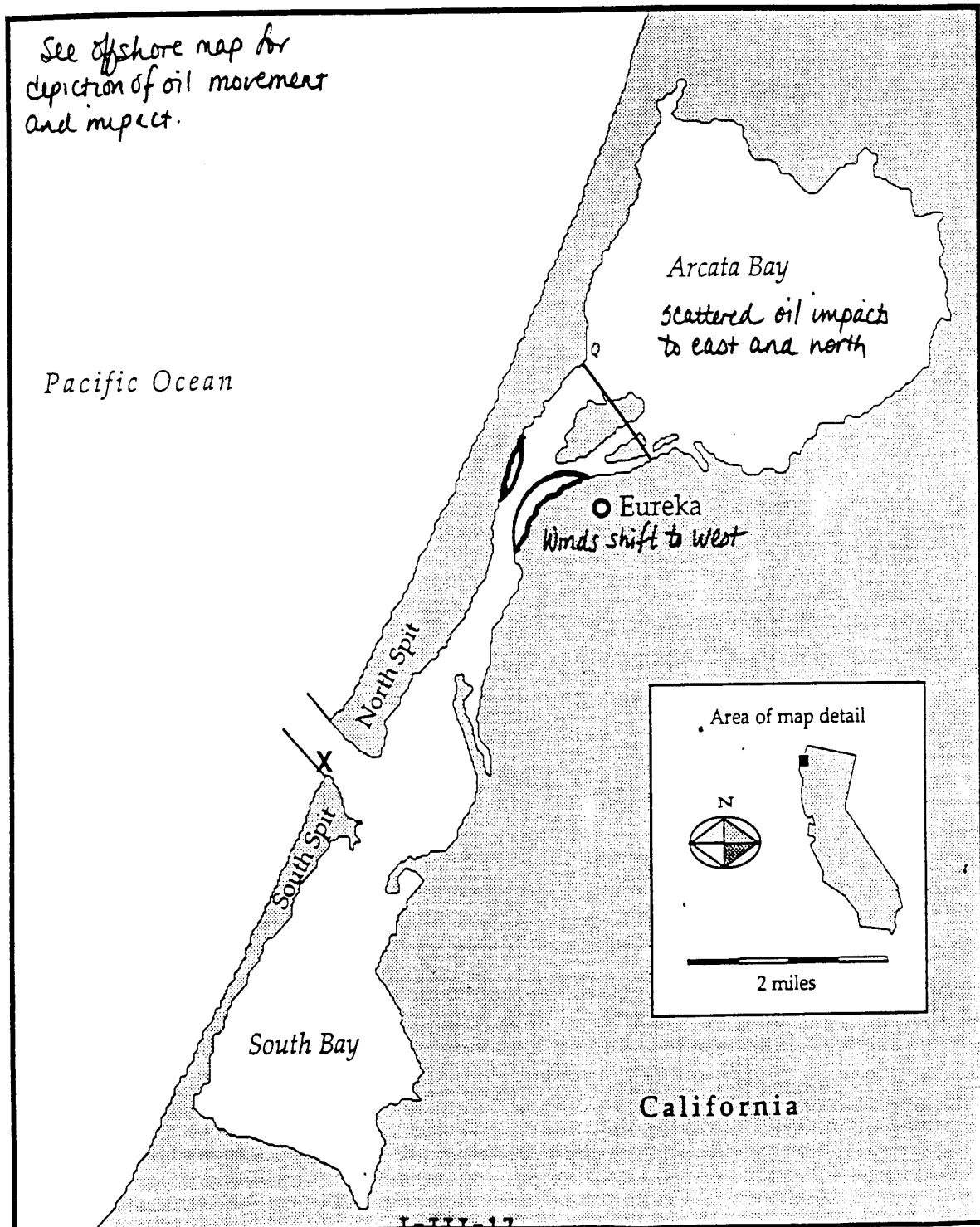
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 4 Feb. 1992 1200

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



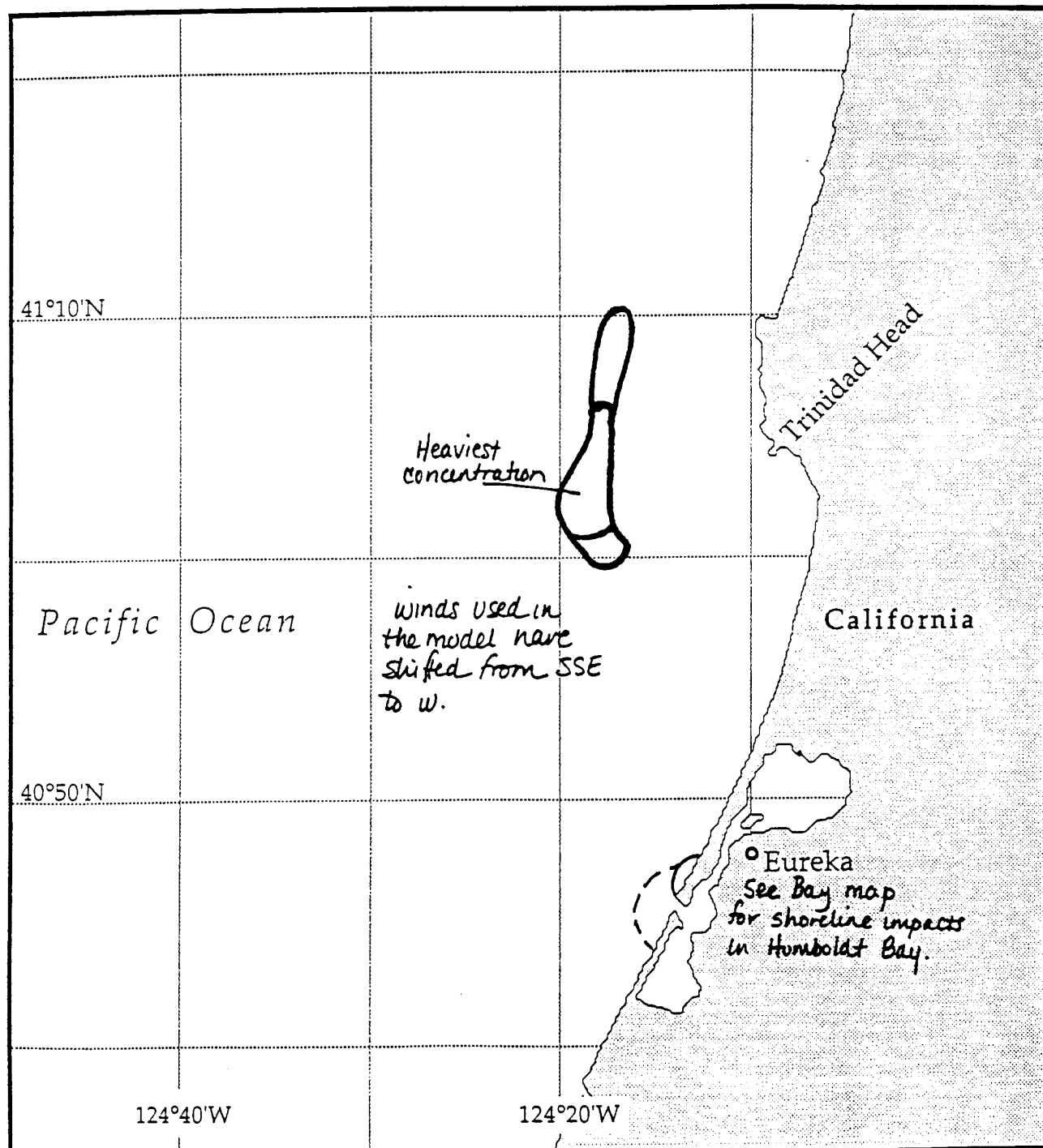
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 4 Feb. 1992 1200

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

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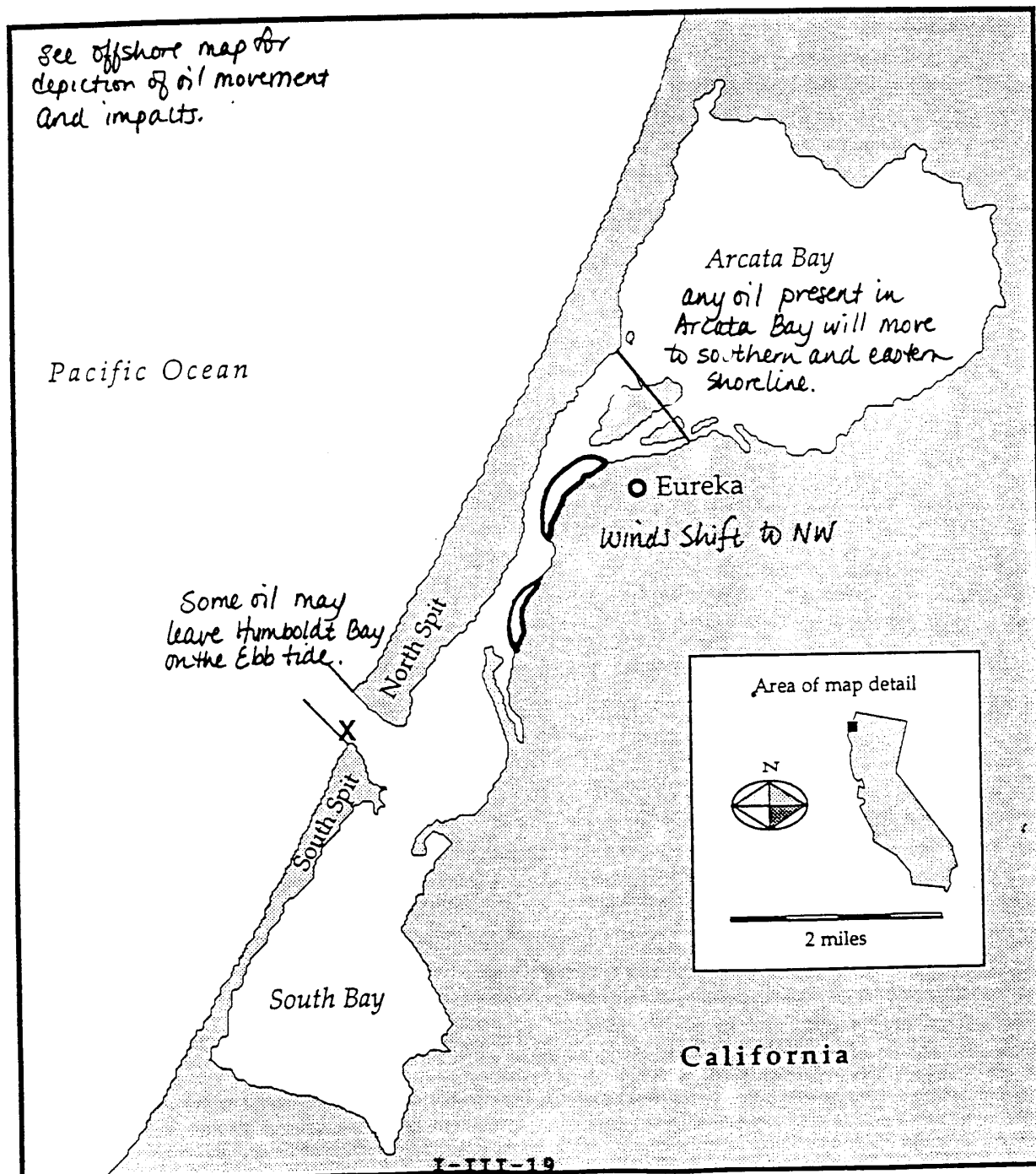
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 4 Feb. 1992 1800

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

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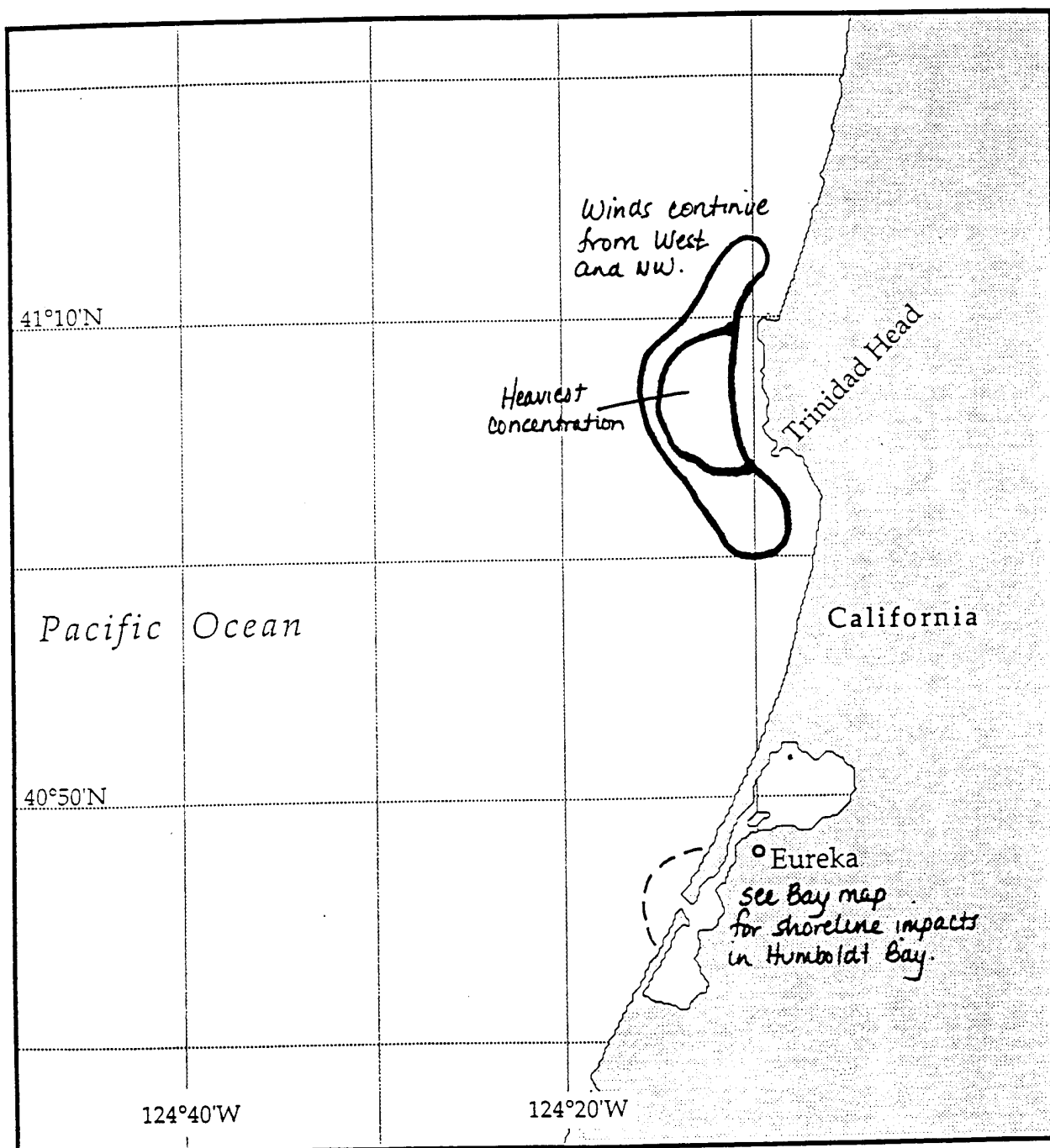
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 4 Feb. 1992 1800

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



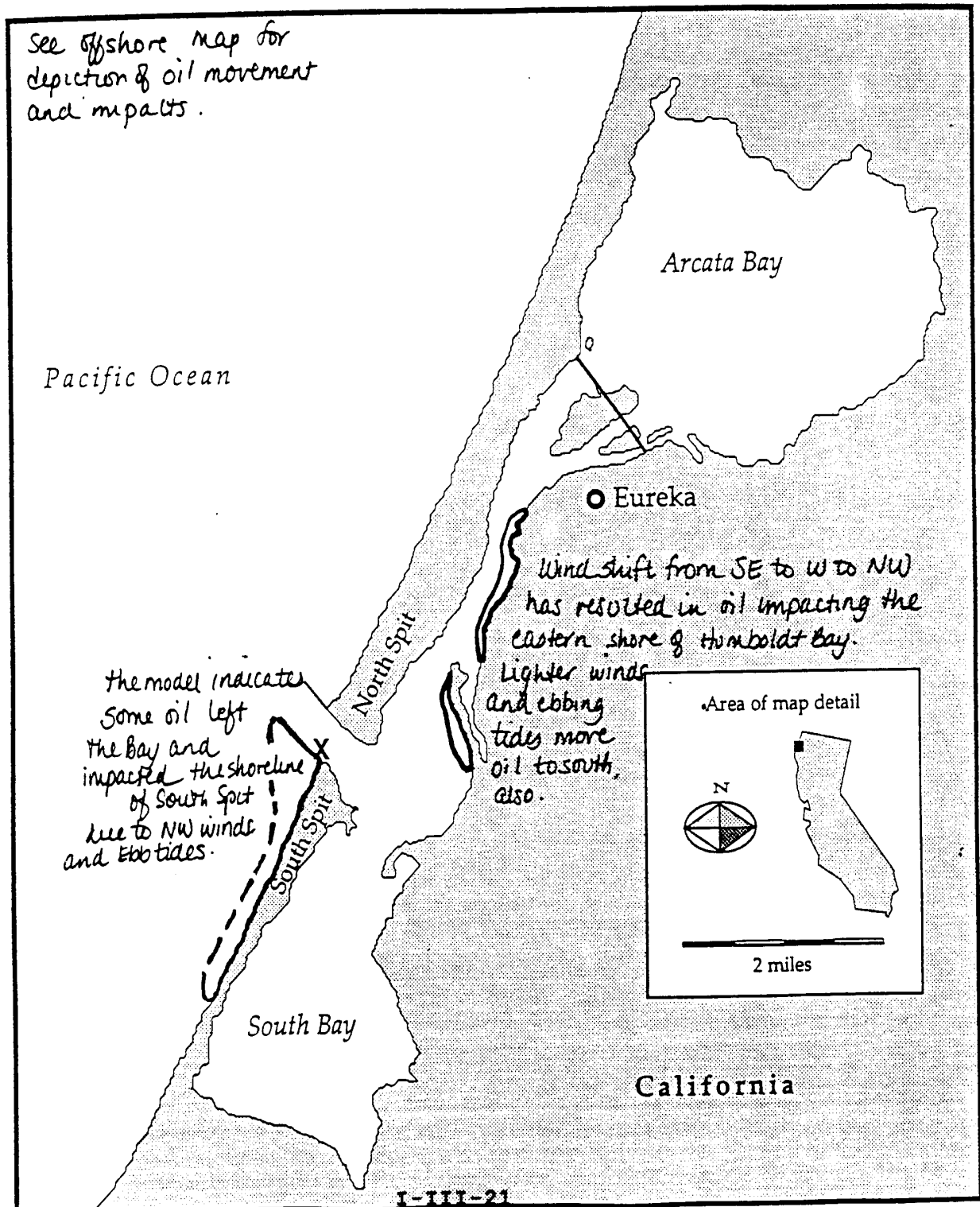
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Bay)  
prepared by NOAA

Date/Time: 5 Feb. 1992 0000

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



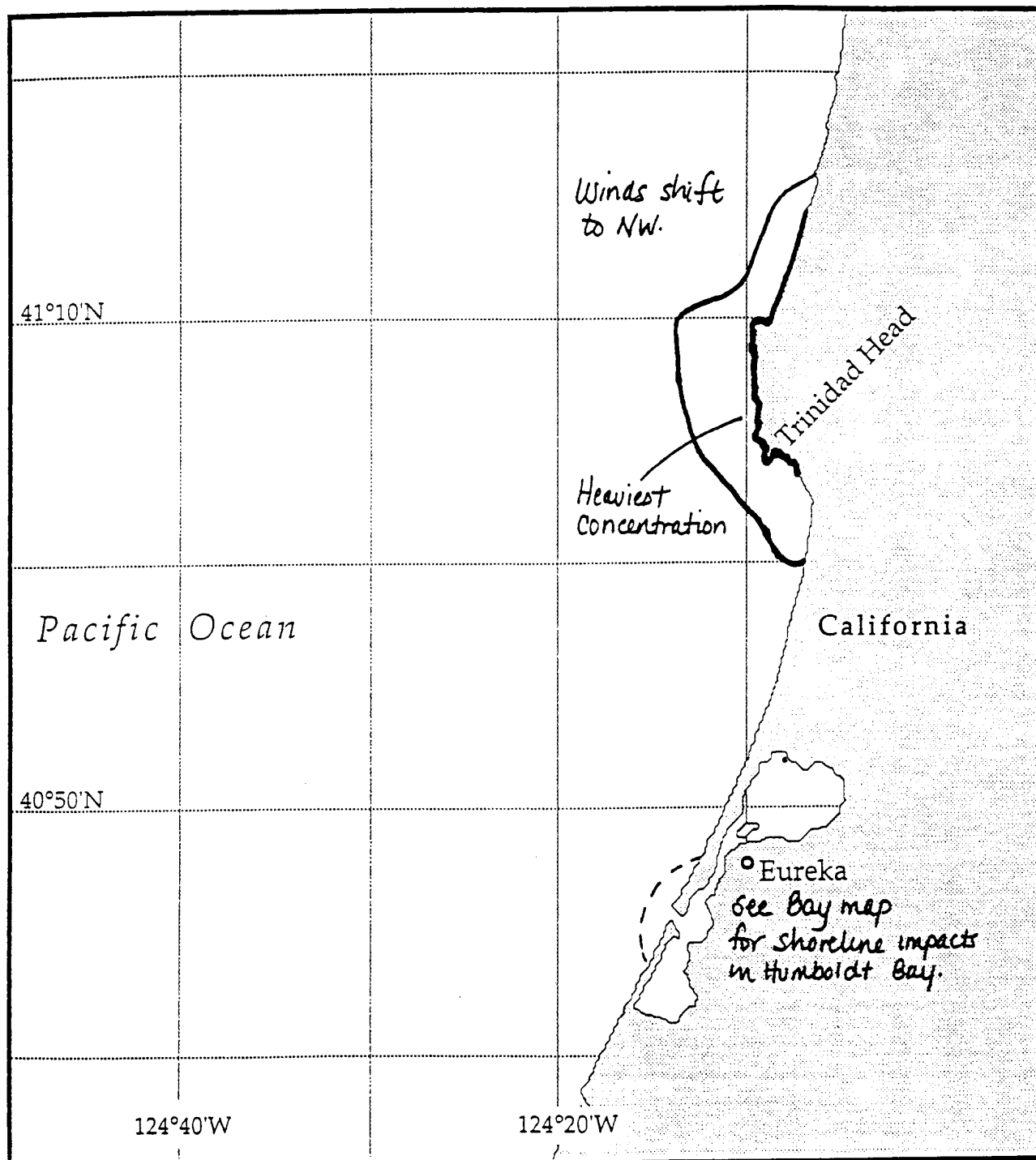
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 5 Feb. 1992 0000

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE





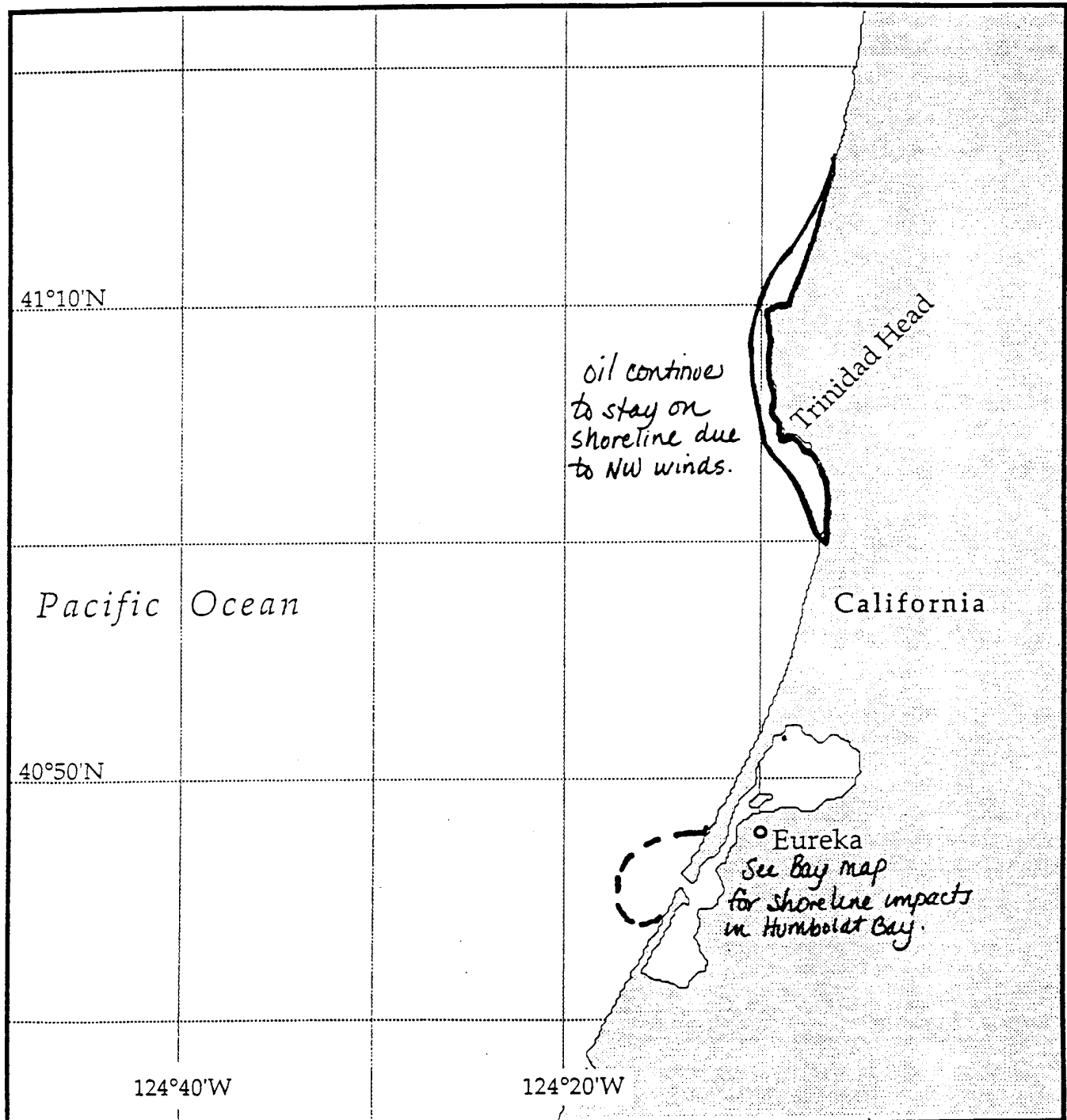
# Humboldt Bay Area Plan

Oil Spill Scenario Map (Offshore)  
prepared by NOAA

Date/Time: 5 Feb. 1992 0600

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



# Humboldt Bay Area Plan

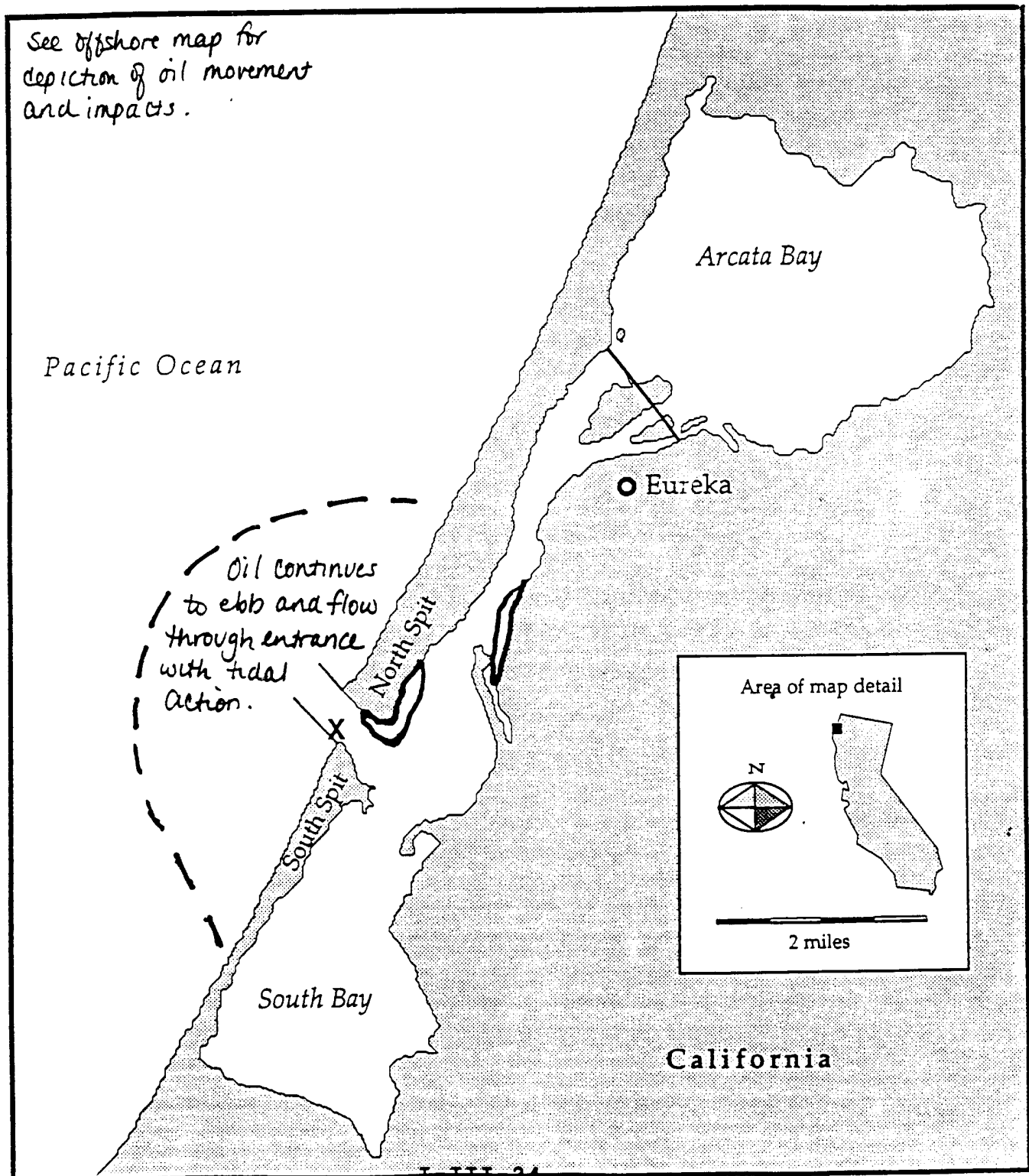
## Oil Spill Scenario Map (Bay)

prepared by NOAA

Date/Time: 5 Feb. 1992 0600

Product Spilled: 40,000 barrels, No. 6  
Fuel Oil (Bunker C)

USE ONLY AS A GENERAL REFERENCE



## **APPENDIX IV DISCHARGE OF MAXIMUM IMPACT (NORTH COAST AREA)**

The Discharge of Maximum Impact occurs off Cape Mendocino when a fully laden tanker loses power and grounds spilling some of it's cargo before a tug is able to arrive on scene to render assistance. This spill was chosen for the Area Committee to consider and evaluate the response actions to be taken if such a spill, however likely, was to occur.

### **HISTORICAL SPILL CONSIDERATIONS**

Recent spill history for this area does not contain a spill of this magnitude. However, recently several serious tanker casualties have occurred throughout the world and considering tanker traffic that transits the California coast, the Area Committee chose to include a similar scenario for this area for planning purposes.

### **HAZARD ASSESSMENT**

Large tankers transit the coastline from Alaska to call on the various California ports including San Francisco and Los Angeles. Approximately 85% of all oil tankers serving California have voluntarily agreed to remain at least 50 nautical miles from the coast when transiting up or down the California coastline. However, there are several land points that extend beyond the mainland (such as Point Arena, Punta Gorda and Cape Mendocino) that almost certainly have tankers transiting within the 50 nm range. However unlikely, it is possible that a tanker could lose power or steering and ground along the North Coast of California. It is also possible that a tanker could experience a fire or explosion while transiting similar to the T/V PUERTO RICAN or T/V MEGA BORG. Depending on the exact location, the transit time for a tug to reach a tanker in distress between Point Arena and Humboldt Bay could be up to 12 hours. Weather can play a key role in an event such as this. The Northern California coast frequently experience high winds and sea states throughout the year. The coast normally is very foggy during the summer months. The weather combined with the rugged terrain can be expected to make salvage and cleanup operations very difficult.

### **VULNERABILITY ANALYSIS**

Essentially the entire California coastline is a highly sensitive environment. While the coast is not as sensitive to oiling as inland wetlands and marshes, it is an ecology with numerous wildlife species, including sea otters and grey whales. In addition, the coast in this area is difficult, if not impossible, to access by land. The entire list of environmentally sensitive sites is too numerous to identify individually here, but are included in detail in Annex E of this plan. Mendocino County alone, has 39 environmentally sensitive sites identified. Many of these are creeks and river inlets. The offshore environmental resources were not identified this planning cycle, but could potentially be impacted by a spill of this magnitude.

### **SCENARIO: DISCHARGE OF MAXIMUM IMPACT (NORTH COAST AREA)**

**Situation:** A tanker fully laden 1.5 million barrel of North Slope crude oil experiences complete loss of power. Oceangoing tugs are not able to reach the vessel before it grounds near Cape Mendocino. The tanker sustains significant damage to it's wing cargo and ballast tanks, spilling 500,000 barrels of North Slope crude oil immediately and the rest of its cargo over the next 12 hours.

**Location:** Cape Mendocino

**Amount:** 500,000 barrels North Slope Crude initially, with an additional 1 million barrels over the next 12 hours.

**Securing Source:** The tank vessel is unstable; tugs on scene.

**Areas at Risk:** Entire North Coastline. Wind and tide will likely carry the spill to impact Cape Mendocino and adjacent coastlines.

**Time of Year:** Winter

**Weather:** Cloudy

Wind: 30+ knots, with gusts to 40 SW to W

Visibility: ½ mi.

Seas: 10-15 feet.

Current: Max Flood

(Note: This scenario is not a required element of this plan and is a large SONS event potentially involving more than one planning area. During the next planning cycle, it is expected that additional guidance will be available on the SONS response and it is anticipated that the cascading of resources within the state will be further defined. Furthermore, an accurate trajectory was not available prior the printing deadline. Therefore, the details of the response strategy were left for the next planning cycle. However, all elements of this plan apply to this, or any similar event, if it were to actually occur.)

## **APPENDIX V POTENTIAL SHORTFALLS**

Under Commandant Note 16471, dated September 30, 1992, the Area Committees are tasked as part of their ongoing work to "...describe shortfalls, including administrative and policy shortfalls, and options for alleviating them (including): equipment, personnel, funds, minimum response times, location and identification of additional resources." In support of this requirement, the Coast Guard joined forces in 1994 with the state of California to investigate the issue of potential shortfalls.

In addition to providing important information to responders and planners on the west coast, this shortfall data is expected to also have a potential use for the state of California in meeting this requirement. Under the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Section 8670.19 of the Government Code) the Administrator shall "...conduct a comprehensive review of all oil spill contingency plans for each area to determine if deficiencies exist in equipment, personnel, training, and other areas determined to be necessary to ensure the best achievable protection of the coastline." This requirement, which has been named the Coastal Protection Review (CPR), will examine the plans and make conclusions on the adequacy of protection systems throughout California marine waters. Since the Vessel and Facility Contingency Plans will heavily reference the Area Plans, it follows that the Area Plans themselves will be a good source of information for the State's CPR. Given the joint need for this information by both the USCG and the State of California, a decision was made by the senior management of both organizations to work together and gather whatever information was possible on potential shortfalls.

This section describes the general, or most obvious, potential shortfalls that have been determined to exist by the members of the Area Committees. Where appropriate, possible options for alleviating the identified shortfalls have been suggested. These conclusions have been reached by the committee reviewing scenario and trajectory information contained in the Area Plans and examining it in detail. Wherever a perceived shortfall has been identified in equipment, personnel, policy or other areas it has been documented.

Work is proceeding in this area continuously and more information with regards to potential resource shortfalls is expected to be completed by October, 1994. It is the goal of the Area Committees to produce a more analytical and detailed shortfall analysis by this date, using a specific methodology to be developed. If this more specific shortfall analysis can be produced as planned, it will be mailed out as an errata at that time (any questions as to whether an errata was produced for the 1994 Area Plans on shortfalls can be directed to the OSPR Planning Branch at 916-327-9988).

The shortfalls identified by the North Coast Area Committee are as follows:

### **EQUIPMENT**

#### **BOOM**

Inadequate amounts of ocean, harbor, and intertidal boom are located on the North Coast. Many revised strategies call for the use of intertidal boom to protect mudflats and tidal inlets. However, there is only a small amount (1300') of intertidal boom present in Eureka.

Fire boom for in-situ burning is not present in North Coast area and could not be delivered prior to weathering of discharged oil.

#### **SKIMMERS**

There is an inadequate number of skimmers available in the North Coast for a large spill. Additional skimmers would have to be flown/driven in from the San Francisco Bay area,

which would take 4-8 hours from notification. Also, all North Coast skimmers are pre-staged in Eureka.

## **SKIMMING VESSELS**

Vessels of Opportunity identified to deploy the USCG VOSS have not yet been tested. As a result, USCG contracts with these vessels have not been established.

An offshore oil recovery vessel (OSRV) is not present in the North Coast. The nearest OSRV is located in Richmond and would take several hours to transit to the North Coast upon notification.

## **BOATS/SKIFFS**

Boats adequate for towing harbor and ocean boom have only been identified within Humboldt Bay.

## **ANCHORS**

Must develop method to anchor boom in rock scarp/cliff walls.

There is an inadequate number of mushroom anchors for booming the mud flats in Humboldt Bay.

## **RESPONSE TIMES**

### **TIME TO ARRIVE ON-SCENE**

The North Coast-based OSRO is likely to be overwhelmed by significant spill. Once notified, it would likely take MSRC equipment/personnel 6-12 hours to augment.

Response to many sites along the North Coast will take several hours due to remote locations, poor or nonexistent roads, etc. Positioning of personnel and equipment by helicopter or logging company “sky crane” should be investigated.

### **TIME TO DEPLOY EQUIPMENT**

In Eureka, there is no Pacific Affiliates/MSRC launch ramp. Small boats/boom/skimbers must be trucked to public ramp (near Hwy 255 bridge) or Fields Landing ramp.

## **CLEANUP TECHNOLOGY**

Current lack of technology for high-energy areas and mudflats. Should test feasibility of “filter fence” (sorbent pom-poms secured in nylon/plastic mesh fencing) concept in the high-energy areas and mudflats of the North Coast.

Should test the feasibility of a deluge system for flooding rip rap. This may reduce/prevent penetration of oil amongst rip rap.

## **COMMUNICATIONS**

Coastal sites have little, if any, cellular or VHF access. In the event of a spill, portable comms suites would have to be transported from the Coast Guard Pacific Strike Team (located in Novato) or California Department of Forestry. As such, it could take 6-12 hours to establish communications in remote locations

## **NOTIFICATIONS**

The number of questions asked and detail required makes CG National Response Center (NRC) notification process too cumbersome. Must consider streamlining.

Time lags are being experienced in notifications. May require additional training to clarify notification procedures. Must reemphasize that notifications are to be carried out even if available information leaves many unknowns.

County OES offices are not available 24-hours for notification. As such, notification process breaking down at that point. Must ensure that someone available 24-hours in each county to continue notification process.

## **ORGANIZATION**

Lack of Unified Command/integration experience. Must ensure that PREP drills involve key UCS members at a minimum.

## **POLICY/PROCEDURES**

In-situ burning and dispersants use off the North Coast must be further researched.

Policy/procedures/liability involved in removing derelict vessels from North Coast harbors must be clarified.

Policy/procedures for use of cooperative-owned equipment staged at a Eureka facility, but needed for spill response at another facility or elsewhere in North Coast must be addressed.

Policy/procedures for accessing sensitive areas of State and Federal Parks should be clarified. Access routes for large machinery (bulldozers, front-end loaders, etc.) must be determined. Should coordinate predesignated routes with Federal and State Parks resource ecologists.

Must address policy regarding decanting skimmed oil/water in North Coast and procedures necessary to gain approval in the event of a spill.

## **PERSONNEL**

Inadequate number of HAZWOPER-certified personnel in North Coast. Identify those with training (Cal Conservation Corps, fire departments, etc.) and qualified HAZWOPER instructors. Encourage counties to maintain list of such personnel.

Inadequate number of trained, “immediate response” personnel located in North Coast. North Coast-based OSRO likely to be overwhelmed with significant spill; MSRC personnel will not be available for 6-12 hours after notification.

No North Coast personnel have been trained in the deployment of intertidal boom.

No North Coast personnel have been trained in deploying the CG VOSS (training is scheduled for the week of 8 Aug 94).

## **RESPONSE PLANS/AREA CONTINGENCY PLAN**

Response strategies have not been tested. Must “field-truth” them to ensure feasibility.

Must test feasibility of command centers identified in North Coast Area Contingency Plan and county plans.

## **MUTUAL AID/NETWORKING**

Should ensure that California Conservation Corps, local fire departments, and local fisherman are involved in response community. Their training, HAZWOPER certifications, and knowledge of the area make them invaluable as “immediate responders”. Methodology for employing these resources must be established.

## **WILDLIFE RESCUE/REHABILITATION**

The North Coast Marine Mammal Care Center at Crescent City has facilities to care for only 10 animals. No specific provisions have been made to care for oiled animals. No other marine mammal care facilities exist in the North Coast.

There are no facilities in the North Coast contingency planning area for the rehabilitation of birds. Some volunteers in both Crescent City and Eureka have been trained to clean and care for oiled birds and could handle roughly 250. The case load is projected to be approximately 3,000 birds in a large spill.

## **VOLUNTEERS**

A methodology for handling convergent volunteers needs to be developed.

## **OTHER RESOURCES**

Must identify local salvage companies (if any exist). Recent groundings have displayed need for vessel recovery and fuel off-load resources in the North Coast. Time required for Bay Area salvor drastically reduces recovery window of opportunity. Coast Guard Pacific Strike Team resources only available to Responsible Party after “federalizing” response.



## **NORTH COAST AREA SHORTFALLS (GENERAL)**

### **EQUIPMENT**

- 1) Inadequate amounts of ocean, harbor, and intertidal boom are located on the North Coast. Many revised strategies call for the use of intertidal boom to protect mudflats and tidal inlets. However, there is only a small amount (1300') of intertidal boom present in Eureka.
- 2) Fire boom for in-situ burning is not present in North Coast area and could not be delivered prior to weathering of discharged oil. The Response Strategy should look into the feasibility of actually using in-situ burning in a response.
- 3) There is an inadequate number of skimmers available in the North Coast for a large spill. Additional skimmers would have to be flown/driven in from the San Francisco Bay area, which would take 4-8 hours from notification. All North Coast skimmers are prestaged in Eureka.
- 4) Vessels of Opportunity identified to deploy the USCG VOSS have not yet been tested. The first field testing will take place in August 1994.
- 5) An offshore oil recovery vessel (OSRV) is not present in the North Coast. The nearest OSRV is located in Richmond and would take several hours to transit to the North Coast upon notification.
- 6) Boats adequate for towing harbor and ocean boom have only been identified within Humboldt Bay.
- 7) A method is not readily available to anchor boom in rock scarp/cliff walls.
- 8) There is an inadequate number of mushroom anchors for booming the mudflats in Humboldt Bay.

### **RESPONSE TIMES/STRATEGIES**

- 1) The North Coast-based OSRO is likely to be overwhelmed by significant spill. Once notified, it would likely take MSRC equipment/personnel 6-12 hours to augment.
- 2) Response to many sites along the North Coast will take several hours due to remote locations, poor or nonexistent roads, etc. Positioning of personnel and equipment by helicopter or logging company "sky crane" should be investigated.
- 3) In Eureka, there is no Pacific Affiliates/MSRC launch ramp. Small boats/boom/skimers must be trucked to public ramp (near Hwy 255 bridge) or Fields Landing ramp.
- 4) Current lack of technology for high-energy areas and mudflats. Should consider testing the feasibility of "filter fence" (sorbent pom-poms secured in nylon/plastic mesh fencing) concept in the high-energy areas and mudflats of the North Coast.
- 5) Should test the feasibility of a deluge system for flooding rip-rap. This may reduce/prevent penetration of oil amongst rip-rap.

### **COMMUNICATIONS**

- 1) Coastal sites have little, if any, cellular or VHF access. In the event of a spill, portable comms suites would have to be transported from the Coast Guard Pacific Strike Team (located in Novato) or California

Department of Forestry. As such, it could take 6-12 hours to establish communications in remote locations

2) Time lags are being experienced in notifications. May require additional training to clarify notification procedures.

3) County OES offices are not available 24-hours for notification. As such, notification process breaking down at that point. Committee should consider recommending that someone be available 24-hours in each county to continue notification process.

## **ORGANIZATION**

Lack of Unified Command/integration experience. Future PREP drills should involve key UCS members, at a minimum.

## **POLICY/PROCEDURES**

Note: The following policy/procedure issues should be researched and reviewed for possible clarification.

1) Policy/procedures/liability involved in removing derelict vessels from North Coast harbors.

2) Policy/procedures for use of cooperative-owned equipment staged at a Eureka facility, but needed for spill response at another facility or elsewhere in North Coast.

3) Policy/procedures for accessing sensitive areas of State and Federal Parks including access routes for large machinery (bulldozers, front-end loaders, etc.).

4) Policy regarding decanting skimmed oil/water in North Coast and procedures necessary to gain approval in the event of a spill.

## **PERSONNEL**

1) Inadequate number of HAZWOPER-certified personnel in North Coast. Identify those with training (Cal Conservation Corps, fire departments, etc.) and qualified HAZWOPER instructors. Encourage counties to maintain list of such personnel.

2) Inadequate number of trained, “immediate response” personnel located in North Coast. North Coast-based OSRO likely to be overwhelmed with significant spill; MSRC personnel will not be available for 6-12 hours after notification.

3) North Coast personnel have not been trained in the deployment of intertidal boom.

4) North Coast personnel have not been trained in deploying the CG VOSS (training is scheduled for the week of 8 Aug 94).

## **RESPONSE PLANS/AREA CONTINGENCY PLAN**

1) Response strategies have not been fully tested. Recommend initiating program to “field-truth” them to ensure feasibility.

2) Recommend testing feasibility of command centers identified in North Coast Area Contingency Plan and county plans.

## **MUTUAL AID/NETWORKING**

Ensure California Conservation Corps, local fire departments, and local fisherman are involved in response community. Their training, HAZWOPER certifications, and knowledge of the area make them invaluable as “immediate responders”. Methodology for employing these resources should be addressed.

## **WILDLIFE RESCUE/REHABILITATION**

1) The North Coast Marine Mammal Care Center at Crescent City has facilities to care for only 10 animals. No specific provisions have been made to care for oiled animals. No other marine mammal care facilities exist in the North Coast.

2) There are no facilities in the North Coast contingency planning area for the rehabilitation of birds. Some volunteers in both Crescent City and Eureka have been trained to clean and care for oiled birds and could handle roughly 250. The case load is projected to be approximately 3,000 birds in a large spill.

## **OTHER RESOURCES**

Identify local salvage companies (if any exist). Recent groundings have displayed need for vessel recovery and fuel offload resources in the North Coast. Time required for Bay Area salvor drastically reduces recovery window of opportunity. Coast Guard Pacific Strike Team resources only available to Responsible Party after “federalizing” response.

## **GENERAL RECOMMENDATION**

Shoreline impact is viewed as inevitable for an oil-spill occurring just off the coast of California when considering the current technology for oil-spill containment and clean-up. Oil spreads rapidly once it impacts the water and boom deployment is timely and, along with skimming operations, is subject to weather/sea state conditions. Skimming vessels are also limited in effectiveness by their skimming capacities and oil-encounter rates. Under the best conditions, a 20% oil recovery rate is excellent. Considering the inevitability of shoreline impact, the travel time for cascading response equipment, and the fact that much of the California coastline is environmentally sensitive, the Area Committee emphatically supports the concept of prescribing minimum distances for offshore passage of vessels, including tankers, other deep-draft vessels and tug-and-barge combinations, all of which are potential oil-spill risks. When defining such minimum distances, oil-spill trajectories should be used. However, the avenue for defining and pursuing such measures is external to the Area Committee process. See Federal Register Notice of Study at FR 44364, August 24 1993, entitled “Port Access Routes Off the Coast of California; Vessel Traffic Regulations for Offshore California Marine Sanctuaries”.

## **APPENDIX VI SPILL HISTORY (SOUTHERN SECTOR)**

See Annex E, Appendix III.

## **APPENDIX VII WORST CASE DISCHARGE (SOUTHERN SECTOR)**

A. The Tank Vessel CINATIT (VLCC) enters the southbound shipping lane just north of green bell buoy “7” (TL) from the seaward side. It is steaming at 9-10 knots, its cargo is approximately 1.5 million barrels of North slope crude. A collision occurs with the foreign container vessel LIPTON which is on the wrong side of the lane. The collision ruptures four of the CINATIT’s tanks and causes an engine room explosion that weakens the vessel’s keel. Two of the LIPTON’s port side fuel tanks are leaking fuel, but have not yet caught fire. All efforts to salvage the CINATIT fail and the ongoing fire prevents lightering. The CINATIT breaks in two, the stern portion quickly sinks, and the bow, with four leaking tanks, but intact, drifts at water’s edge.

B. The incident occurs on February 19 at midnight. The winds blow at 20 kts from the SE on Feb 19, the first day of the oil spill. On Feb 20, they shift from the SE to the S, then to the NW, then to N. The winds return to blow out of the NW at midnight on the morning of Feb 21, and remain from the NW at 15 kts for the rest of the modeled spill.

C. Affected/potentially affected areas throughout the course of this scenario include:

- 1) Santa Catalina;
- 2) The LA/LB Port Complex including Least Tern Nesting Site;
- 3) Santa Monica Bay South beaches and Palos Verdes;
- 4) San Clemente Island;
- 5) All Orange County shoreline and Bolsa Chica Wetlands, and;
- 6) San Diego County shoreline.

D. The required response action elements are presented in chronological sequence. These include initial actions, spill response organization, containment, countermeasures and cleanup strategies, resource requirements, available resources and sources of procurement, time necessary for cleanup, disposal options and procedures and criteria for terminating the response activity. The following response strategy for this scenario and the estimated times are for planning purposes only and do not reflect performance standards.

### **1) 0-2 Hours.**

CG receives notification from the T/V CINATIT via CH16 at 0000, 19 Feb. Vessel reports its location and condition as per above scenario, states their intentions, and establishes comms schedule.

CG initiates Search and Rescue (SAR) and firefighting response per District Eleven SAR Plan and MSO LA/LB Firefighting Contingency Plan. CG helicopter launched from LAX. Search and rescue concerns are at all times priority and exclusive of all other concerns. For the purposes of this

response strategy, search and rescue efforts are directed by the Group and not addressed in this plan.

CG initiates external and internal notifications including CA Office of Emergency Services (OES), CA Dept of Fish and Game (F&G) Oil Spill Prevention Response (OSPR), and CG District Eleven (D11). CG/OSPR initiates internal recalls/mobilizes Unified Command System (UCS) and Incident Command System (ICS) and D11 activates the Regional Response Team (RRT). Notify Scientific Support Coordinator (SSC) and mobilize SSC network. All response entities make notifications as per internal directives.

CG MSO LA/LB (predesignated Federal on Scene Coordinator (FOSC)) initiates pollution and casualty investigation efforts. Initial investigators enroute via designated SAR platform, i.e. 82 patrol boat, 180 cutter, 210 cutter, or 378 cutter. ETA for CG/OSPR representatives, 2 hours. OSPR investigators contacted and rendezvous established.

Confirmed vessel is of foreign registry and operation. Responsible Party (RP) and vessel qualified individual identified for the cleanup. FOSC requests to access Oil Spill Liability Fund in the amount of \$30 million. Approval granted, fund ceiling to be continually reevaluated. FOSC notifies RP of federal assumption. CG initiates oil spill cleanup efforts. Regional open water recovery assets contracted and dispatched including Clean Coastal Waters, Marine Spill Response Corporation (MSRC), Clean Seas, and Navy Supsalv. Weather limits vessels which can safely operate offshore. Clean Seas alerts dispersant aircraft/helo dispersant system. Estimated on-scene arrival times for Oil Spill Recovery Vessels (OSRVs):

Clean Waters I +2.5 hours  
Spirit +2.5 hours  
Recovery I and II +2.5 hours  
MR Clean +8 hours  
Mr Clean II +12 hours

Mr. Clean III +6 hours  
California Responder +6 hours  
Pacific Responder +24 hours  
MSRC OSRV fm Astoria +76 hours  
11 Nav Supsalv Marco V skimmers +48 hours  
Three VOSS vessels fm LA-LB +6 hours  
Clean Seas barges +4 hours  
MSRC barges +8 hours

Remote Oil Spill Sensor System (ROSSS) called out. Area Contingency Plan (ACP) Airops plan activated. Fishermen's Oil Response Team (FORT) notified and 10 vessels called out. Thirty FORT vessels are placed on standby.

ACP Commsplan activated.

Initial press release issued. District Eleven public affairs staff establishes press operations. National Strike Force Coordination Center (NSFCC) and Pacific Area Strike Team (PIAT) alerted, assets requested including PST COMCEN, OWOCR's, salvage pumps, storage equipment. CG Public Information/Affairs Team (PIAT) dispatched.

RP/CG notifies facilities with water intakes in the area.

RP notifies bird rescue/wildlife coordinators.

**2) 02-04 hours.**

Evaluate ships' diagrams and intentions. Assess vessel's current status and identify cargo and condition. Salvage issues are being actively addressed. Tugs dispatched to assist the vessels as necessary.

Clean Waters I, Spirit, Recovery I and II o/s.

Address health and safety issues for response personnel and community-at-large. Site characterization team on scene developing site safety plan and identifying health and safety issues. Site entry plan completed.

Establish initial Joint Command Post for UCS at Marine Safety Office LA/LB. Identify primary staging area.

Receive initial information and situation report from CG platform and aircraft. Request CG Aireye support.

RP/Qualified Individual initiates ICS and internal response org.

Alert aircraft and schedule ROSSS overflights for assessment.

The CINATIT breaks in two and the stern sinks, leaving the bow awash with four leaking tanks.

Receive SSC initial oil spill trajectory.

Start active planning and prioritizing of resources at risk. Preventative booming plan/staging initiated for priority areas (Ballona Creek, Marina Del Rey, Malibu Creek, Bolsa Chica Wetlands, Alamitos, Newport Bay, etc.)

Establish safety zones, Broadcast Notice to Mariners, airspace safety separation scheme. Address applicable waterways management issues.

Initiate salvage operations. Tugs dispatched to handle floating bow and assist LIPTON as necessary.

**3) 04-06 hours.**

RP Activates Hazardous Waste Operations and Emergency Response (HAZWOPER) training program at primary staging site.

Components of ICS/UCS forming.

Health and safety parameters established.

Response resources arriving on-scene. Unable to conduct operations due to weather.

Alternate response technologies (ART) options considered (dispersants and in-situ burning specifically addressed).

First light overflights. Tracking Datum Marker Bouy (DMB) deployed by SAR resources.

**4) 06-10 hours.**

First light overflights and data evaluated. Trajectories indicate landfall a few days away. Maximize open water recovery efforts/equipment. Mobilize Pacific Coast open-water recovery assets

MSRC Astoria +42 hours

Clean Bay +24 hours

Clean Sound +66 hours

MSRC Hawaii +7 days

FOSC declares Spill of National Significance (SONS). Components of UCS meet with SONS organization.

Initial local/regional callouts at predesignated locations (i.e. Marina del Rey, Palos Verdes point, command post, Bolsa Chica, etc.).

Operations decisions made based on current info. Response priorities established/detailed and mobilized for shoreline i.e. shoreline workers. Prioritize staging operations. Establish primary Staging Area. Recognizing the sensitivity of Santa Monica Bay, decision made not to use dispersants except on leading edge of the spill to mitigate progress of spill in the direction of Santa Catalina Island.

Mobilize Navy assets in Port Complex and San Diego e.g. boom, skimmer.

Activate volunteer portion of Area Contingency Plan.

Mobilize wildlife recovery system.

Procure area shoreside cleanup assets (equipment/personnel). Make initial contacts with shoreline cleanup contractors. Establish active liaison with command post.

Additional CG assets arriving in area/on-scene, e.g. Pacific Strike Team (PST), Cutters, additional aircraft, District Response Advisory Team (DRAT), etc.

**5) 10-14 hours.**

Fishing vessels/vessels of opportunity identified. Three Vessels of Opportunity Skimming System (VOSS)'s dispatched. Decisions made on how to handle "day" boats, i.e. cleaning, logistics, support. Establish boat cleaning at King Harbor, logistics section at King Harbor, crew relief, etc.) Line up storage barges.

Elements of ICS/UCS are starting to address numerous details.

Regular overflight schedule established.

Open-water recovery vessels arriving as per ETA's in 0-2 hours.

**6) 14-18 hours.**

Public information staff coordinates first Press Conference.

Water intakes identified and company's informed/liaison's established with command post.

Establish daily UCS meetings each afternoon. Local government involvement being coordinated by OSPR.

Site Safety Plan developed by Safety Officer. On-scene Safety Officer conducting on-site monitoring.

Public information staff issuing periodic, updated press releases.

Managing incoming resources (personnel/equipment) at primary staging area.

Maintaining protective booming.

Open-water recovery remains infeasible due to weather. Open-water recovery assets continue to arrive. No impact to shoreline as of this time.

Air Operations plan on-line prioritizing overflight schedule/needs.

Natural Resource Damage Assessment (NRDA) personnel arriving, forming teams, and developing sampling plan/coordination. Stranding network for marine mammal rehab notified. Initial recovery teams identified for bird recovery/rehabilitation.

Onshore storage and transfer facilities identified. Tank ship destination a priority site. Storage and transport barges enroute. Onshore facilities for disposal identified.

Planning section identifying National resources/equipment. Assessing real time info to anticipate next actions.

Joint investigative teams established.

Finance section on-line and operating. National Pollution Funds Center personnel arrive.

Mobile communications suites arriving primary staging area for subsequent redeployment (e.g. MSRC, OES, PST, CAMSPAC SF, etc.)

EMS on-site at the primary staging area. Field kitchens and catering contracts established.

NOTE: This response strategy focuses on the events leading up to the full establishment of the ICS organization. From the point of ICS organization coming on-line, it deals principally with the operation issues and does not specifically address the details of each of the support functions/components. These



are further described in the appropriate annexes to this plan.

**7) 18-30 hours.**

Weather continues to preclude open-water recovery. ROSSS overflights continuing.

Clean Seas third OSRV arrives.

All ICS support activities continue.

**8) Day Two (from 0630 20 Feb).**

At this point trajectory and overflight information indicate that Santa Catalina Island is at risk. Logistics and planning team dispatched to evaluate options/strategies.

Local shoreline staging decisions made. Secondary staging sites established from Venice Pier south to Palos Verdes for shoreline cleanup efforts including a Field Command Post. Develop shoreline cleanup and protection plan as per site summary information, Annex A, Appendix IV, Tabs B, C & D. Contractors notified to provide 500 shoreline cleanup workers. Precleaning of beaches initiated. Identify and procure kelp cutters for Palos Verdes point. Establish interagency SCAT's (Shoreline Cleanup Assessment Teams). SCAT's develop worksheet and initiate beach surveys.

Beach management issues addressed with local authorities.

MSRC San Francisco OSRV arrives.

Major field command post established on Santa Catalina and liaison with harbor master established. Contractors put on notice to have 500 shoreline workers available to support Santa Catalina ops.

Morning and Evening command briefs scheduled/on-line.

**9) Day 3.**

Weather abates and open-water recovery efforts commence. On-scene recovery capacity approximately 90,000 bbls/day. At the end of day three, it is estimated that 30% of the discharged approximately 1.5 million barrels has evaporated/dissipated. A factor of 2 is used for planning purposes to calculate mouse/emulsion for recovery efforts. The result is an estimated two million barrels of oil/water emulsion to recover. In keeping with planning parameters, 50% (approximately 1 million barrels) of this is estimated to impact shoreline and 50% (approximately 1 million barrels) to be recovered via open-water operations. At end of day three, approximately 50,000 bbls have been recovered in open water operations.

Overflights continue.

Three VOSS' on-line.

Develop a diversion boom plan for Santa Catalina Island based on site summary sheet

and environmental sensitivity data (Catalina Harbor is boomed). A minimum of 10,000 feet of boom is needed. Identify a major need for small workboat support (boats and operators).

With the potential recognized for the leading edge of the oil to reach Santa Catalina Island, all parties agree that due to harbor seal pupping on the island, dispersant application on leading edge is tested/applied. For the purposes of this strategy, minimal effectiveness is assumed.

Response Task Forces established for Palos Verdes and North, Santa Catalina Island, LA/LB Harbor area.

#### **10) Day 4.**

Oil impacts Palos Verdes. Shoreline cleanup workers begin active cleanup. Temporary storage and disposal of shoreline cleanup debris being addressed.

MSRC OSRV from Astoria arrives. Total derated open-water skimming capacity at approximately 100,000 barrels per day.

All elements of UCS continue applicable efforts.

Approximately 100,000 bbls have been recovered in open water operations at end of day four.

#### **11) Day 5.**

Oil impacts Santa Catalina Island. Major logistics issues/limited access to shoreline and staging being addressed. Cleanup operations ongoing. Planning section recognizes possibility of impact on San Clemente Island and makes plans for that contingency. Active links with Navy/MSO San Diego personnel established. JRT activated. San Clemente Task Force established.

Day five estimate of recovered oil via open water cleanup ops is approximately 140,000 bbls.

#### **12) Day 6-11.**

It is estimated from trajectory and wind conditions that Orange County beaches will be impacted by the oil by day 11. Orange County Task Force established.

Santa Catalina and Palos Verdes point cleanup is ongoing.

Beach teams dispatched to Orange County Beaches and SCAT efforts expanded to include these areas. Contractors notified to provide 500 shoreline workers. Beach precleaning begins. Two field command posts are established on Orange County beaches.

San Diego beaches identified as potentially at-risk. San Diego task force established.

At the end of day 11, approximately 344,000 bbls recovered in open water operation.

### **13) Day 11-29.**

Oil impacts Orange County Beaches on day 11 at Huntington/Newport. Active cleanup is initiated. Palos Verdes and Catalina cleanups are ongoing. Daily assessments continue. AM and PM briefings in place. Full SONS on-line.

SCATs provide frequent assessments and make recommendations to UCS for “cleanup complete” segment by segment. FOSC authorizes termination of active cleanup efforts based on SCAT recommendations and all other available info. NRDA teams continue ongoing assessments.

Demobilize task forces as areas are cleaned.

### **14) Day 30.**

Open-water recovery operations completed/secured. Approximately 1 million barrels recovered via open-water ops. SCATs continue efforts in remaining impacted areas. Continued shoreline cleanup as necessary.

Cleanup of vessel and response equipment an important issue. Plans developed to facilitate effective equipment cleaning during demob phase of open-water recovery efforts.

### **15) Day 31 - demobilization.**

SCATs provide frequent assessments and make recommendations to UCS for “cleanup complete” segment by segment. FOSC authorizes termination of active cleanup efforts based on SCAT recommendations and all other available info. NRDA teams continue ongoing assessments.

### **16) Major Resource Requirements.**

Santa Catalina Island - 20,000 feet of boom; 1,000 workers.

Palos Verdes/Santa Monica Bay beaches - 5,000 feet of boom;  
500 workers.

LA/LB Harbor area - 20,000 feet of boom; 500 workers.

Orange County - 20,000 feet of boom; 2,000 workers.

San Diego County - 60,000 feet of boom; 2,000 workers.

Offshore/Open water - 80,000 feet of boom;

San Clemente Island - 20,000 feet of boom; 1,000 workers.

Twelve major OSRVs, eleven Navy Supsalv vessels, and at least four tugs and barges to transfer to.

### **17) Shortfalls:**

- a) No local availability of fire boom. Substantial expense to maintain local stockpile.
- b) Quantity and stockpiled dispersant may not be best dispersant for a given product. COREXIT 9527 is currently stockpiled. Availability of other dispersants unknown.
- c) Availability of trained local volunteers and workers will be time-dependent. Initially, the number of trained volunteers and workers will be finite. As the spill progresses through time, OSHA training classes can be continuously conducted for arriving, untrained personnel. This scenario has identified a need for 7,700 shoreline workers.
- d) Availability of small work boats and trained operators will limit efforts in the many inaccessible portions affected by this scenario (i.e. Santa Catalina, PV Point, San Clemente Island).
- e) Potential conflicts between investigative actions and cleanup efforts. For example, any legally imposed requirement associated with NRDA or recovered oil amount and effects may hamper/limit cleaning operations.
- f) Uncertainty as to availability of cascable equipment due to regulations, permits, and operating limitations of industry in other areas from which the OSRVs are drawn. This scenario presumed the availability of all cascable 12 major OSRVs.
- g) Offshore decontamination of vessels and equipment may be a regulatory issue whereby effective means of removing oil from vessels may be hampered. Vessels required to come into port for cleaning reduce time in active skimming ops, thus reducing further the derated capacity of the skimmers.
- h) Deployment of public equipment, i.e. NSF OWOCRs (who/how) needs to be addressed. RP's not required to plan for this in current contingency plans.

## **APPENDIX VIII MAXIMUM MOST PROBABLE DISCHARGE (SOUTHERN SECTOR)**

A. The Tank Vessel FRACTURED is offloading North Slope Crude on 19 February at the El Segundo Marine Terminal. The vessel discovers it is leaking oil and estimates approximately 3,000 barrels of North Slope Crude has entered the water from a suspected crack in the hull below the waterline.

B. The incident occurs on February 19 at midnight. The winds blow at 20 kts from the SE on Feb 19, the first day of the oil spill. The seas are 8 - 10 feet. On Feb 20, they shift from the SE to the S, then to the NW, then to N. The winds return to blow out of the NW at midnight on the morning of Feb 21, and remain from the NW at 15 kts for the rest of the modeled spill.

C. Affected/potentially affected areas throughout the course of this scenario include:

- 1) Marina Del Rey;

- 2) Ballona Creek;
- 3) King Harbor;
- 4) All Santa Monica Beaches and Malibu/Topanga Beaches;

D. The required response action elements are presented in chronological sequence. These include initial actions, spill response organization, containment, countermeasures and cleanup strategies, resource requirements, available resources and sources of procurement, time necessary for cleanup, disposal options and procedures and criteria

for terminating the event. The following response strategy for this scenario and the estimated times are for planning purposes only and do not reflect performance standards.

**1) 0-2 Hours.**

CG receives notification from the T/V FRACTURED via CH16 at 0000, 19 Feb. Vessel reports its location and condition as per above scenario, states their intentions, and establishes comms schedule. Vessel estimates approximately 3,000 barrels may have been released. Responsible party and qualified individual are identified for the cleanup. Responsible party stops all transfer operations and actively pursues effort to identify source including hiring divers. Facility draws back on pipeline and investigates possibility of pipeline damage.

CG initiates external and internal notifications including CA Office of Emergency Services (OES), CA Dept of Fish and Game (F&G) Oil Spill Prevention Response (OSPR), and CG District Eleven (D11). CG/OSPR initiates internal recalls/mobilizes Incident Command System (ICS) and Unified Command System (UCS) and D11 activates the RRT. Notify Scientific Support Coordinator (SSC) and mobilize SSC network.

CG MSO LA/LB (predesignated Federal on Scene Coordinator (FOSC)) initiates pollution and casualty investigation efforts. Initial CG and OSPR investigators enroute via designated CG/RP platform.

Confirmed vessel is of United States registry. RP and qualified individual are identified for the cleanup. Responsible party (RP) initiates internal recall and implements their plan. FOSC requests to access Oil Spill Liability Fund in the amount of \$500,000. Approval granted, fund ceiling to be continually reevaluated. RP initiates oil spill cleanup efforts including, for example, immediate booming of the vessel/area using boom from support vessel maintained on-scene as weather permits. Regional open-water recovery assets contracted and dispatched including Clean Coastal Waters, Marine Spill Response Corporation (MSRC), Clean Seas, and Navy Supsalv. Weather limits which vessels can safely operate offshore. Clean Coastal Waters alerts dispersant aircraft/helo dispersant system (+6 hours). Estimated on-scene arrival times for Oil Spill Recovery Vessels (OSRV):

Clean Waters I +3.5 hours  
Spirit +4.0 hours  
Recovery I and II +4.5 hours  
MR Clean II +7 hours  
California Responder +6 hours  
11 Nav Supsalv Marco V skimmers +48 hours

Clean Coastal Waters dispatches four Recon boats. Remote Oil Spill Sensor System (ROSSS) notified. Area Contingency Plan (ACP) Airops plan activated. Fishermen's Oil Response Team (FORT) notified and 10 vessels called out. Thirty FORT vessels are placed on standby.

ACP Commsplan activated.

Initial press release issued. District Eleven public affairs staff establishes press operations. National Strike Force Coordination Center (NSFCC) and Pacific Area Strike Team (PIAT) alerted, assets requested including PST COMCEN, OWOCR's, salvage pumps, storage equipment. CG Public Information/Affairs Team (PIAT) dispatched.

Preventive booming plans for Marina Del Rey, King Harbor and Malibu Creek activated. Responsible party mobilizes 200 shoreline workers for first light. Primary staging area and RP command post established at Chevron Beach Center.

RP/CG notifies facilities with water intakes in the area.

RP notifies bird rescue and wildlife coordinators.

## **2) 02-04 hours.**

Evaluate ships' diagrams and intentions. Assess vessel's current status and identify cargo and condition. Tugs dispatched to assist the vessel as necessary.

Address health and safety issues for response personnel and community-at-large. Site characterization team on-scene developing site safety plan and identifying health and safety issues. Site entry plan completed.

Receive initial information and situation report from CG platform and aircraft. Request CG Aireye support.

Alert aircraft and schedule ROSSS overflights for assessment.

No additional oil appears to be entering the water. Tank testing for water indicates crack in hull of one of the vessel's cargo tanks.

Receive SSC initial oil spill trajectory. Indicates all of Santa Monica Bay at risk. RP organizing an additional 300 workers for beach precleaning and staging at first light.

Establish safety zones, Broadcast Notice to Mariners, airspace safety separation scheme. Address applicable waterways management issues.

Start active planning and prioritizing of resources at risk. Preventative booming plan/staging ongoing for priority areas (Ballona Creek, Marina Del Rey, Malibu Creek, King Harbor).

200 California Conservation Corps personnel called out.

## **3) 04-06 hours**

RP activates Hazardous Waste Operations and Emergency Response (HAZWOPER)

training program at primary staging site.

Components of UCS forming. Establish initial Joint Command Post (UCS) at Chevron Beach Center.

Preliminary on-site hazards assessment completed by RP. Health and safety parameters, characterization, and site safety plan completed. Response resources arriving on-scene (Clean Waters, California Responder, Recovery 1 and 2, Spirit; approx 57,000 per day derated skimming capacity). Operations limited due to weather. Mobilizing three Vessels of Opportunity Skimming System (VOSS) in LA/LB (approximately 9,500 bbl per day derated skimming capacity; ETA +18 hours). Fishing vessels and vessels of opportunity identified Mariner's Oil Spill Team (MOST).

Alternate Response Technologies (ART) options considered (dispersants and in-situ burning specifically addressed).

First light overflights. ROSSS airborne and transmitting images. Marina Del Rey, Ballona Creek, and King's Harbor boomed. RP hiring storage barges from LA/LB (approximately 20,000 bbls storage capacity - +6 hours).

Vessel repair plans initiated. For the purposes of this response strategy, repair activities are not discussed further.

#### **4) 06-10 hours.**

First light overflights and data being evaluated. Oil impacts Dockweiler Beach and Marina Del Rey breakwater. Beach cleaning resources dispatched to impacted areas. Secondary staging area established at Dockweiler. Workers continue to stage arriving equipment at primary staging area. Second Mr. Clean (Clean Seas vessel) arrives on-scene. MSRC Pacific Responder (San Francisco) put on alert.

FOSC declares Spill of National Significance (SONS). Components of UCS meet with SONS organization.

Operations decisions made based on current info. Response priorities established/detailed and mobilized for shoreline i.e. shoreline workers. Prioritize staging operations. Establish additional secondary staging areas.

Activate volunteer portion of Area Contingency Plan.

Mobilize wildlife recovery system. Network for marine mammal rehab notified.

Additional CG assets arriving in area/on-scene e.g. Pacific Strike Team (PST), Cutters, additional aircraft, District Response Advisory Team (DRAT), etc.

Regular overflight schedule established.

Public information staff coordinates first Press Conference.

#### **5) 10-14 hours.**

Elements of UCS are starting to address numerous details. UCS command level

briefing conducted each morning.

Preventive measures completed at Malibu Creek.

Recognizing the sensitivity of Santa Monica Bay, decision made not to use dispersants.

Decisions made on how to handle “day” boats i.e. cleaning, logistics, support. Establish boat cleaning at King Harbor, logistics section of King Harbor, crew relief, etc.)

Site Safety Plan developed by Safety Officer. On-scene Safety Officer conducting on-site monitoring.

**6) 14-18 hours.**

Oil impacts Malibu beaches vicinity of Malibu Creek. Identify and organize interagency SCAT's (Shoreline Cleanup Assessment Teams). SCAT's develop worksheet and initiate beach surveys.

Establish daily UCS meetings PM and AM. Local government involvement being coordinated by OSPR.

Public information staff issuing periodic, updated press releases.

Managing incoming resources (personnel/equipment) at primary and secondary staging areas.

Maintaining protective booming.

Open-water recovery remains limited due to weather.

Air Operations plan on-line prioritizing overflight schedule/needs.

Natural Resource Damage Assessment (NRDA) personnel arriving, forming teams, and developing sampling plan/coordination. Initial recovery teams identified for bird recovery/rehabilitation.

Onshore storage and transfer facilities identified. El Segundo Marine Terminal a priority site. Storage and transport barges o/s. On-shore facilities for disposal identified. Assessing real time info to anticipate next actions.

Joint investigative teams established.

Field command post established in Malibu.

Finance section on-line and operating. National Pollution Funds Center personnel arrive.

Mobile communications suites arriving primary staging area for subsequent redeployment (e.g. MSRC, OES, PST, CAMSPAC SF, etc.). One dispatched to Malibu.

NOTE: This response strategy focuses on the events leading up to the full establishment of



the UCS organization. From the point of UCS organization coming on-line, it deals principally with the operation issues and does not specifically address the details of each of the support functions/components. These are further described in the appropriate annexes to this plan.

**7) 18-30 hours.**

Weather continues to limit open-water recovery. ROSSS overflights continuing.

All UCS support activities continue.

**8) Day Two (from 0600 20 Feb).**

At this point, oil has impacted approximately 5-10 miles of Malibu Beaches/Santa Monica Bay Beaches.

Secondary staging sites established from Venice Pier south to Palos Verdes for shore-line cleanup efforts including a Field Command Post. Develop shoreline cleanup and protection plan as per site summary information, Annex A, Appendix IV, Tabs B, C & D. Identify and procure kelp cutters for Palos Verdes Point.

Morning and Evening command briefs scheduled/on-line.

At the end of day two, it is observed that most of the oil remaining on the open water is lightly concentrated or mostly sheen. The Pacific Responder is stood down and Navy Supsalv is secured. Recovery from open-water skimming operations is estimated as 250 bbls given limited ability to operate effectively in the weather conditions stated with a rapidly spreading/thinning oil.

**9) Day 3.**

Weather abates and open-water recovery efforts continue. On-scene derated recovery capacity estimated at approximately 80,000 bbls/day. However, all that remains in the open water is heavy sheen. Open-water skimming becomes marginally effective under these conditions. At the end of day three, it is estimated that 52% of the discharged 3,000 barrels has naturally dispersed (approximately 1,600 bbls). It is also estimated that 1,050 bbls has evaporated. At the end of 24 hours, the water content of the discharged oil was approximately 75%. This leaves, at the end of day three, approximately 670 bbls of recoverable oil. Using standard planning tool of 50% on the beaches and 50% in open water, it is estimated that at the end of day three approximately 335 bbls would have remained in the water had no recovery been accomplished, and 335 bbls impacted the shoreline.

Shoreline impact ranges from Malibu down to Dockweiler with heavier concentrations of oil in the Malibu area. Impacted shoreline is affected by "stripes" of oil ranging from 3 inches wide to 3 feet wide and spotty. Approximately 10-15 miles of beach are impacted. SCAT's actively evaluating and recommending shoreline cleanup strategies and determining "how clean is clean" (signing off) segment by segment. Reoiling is light. Demobilizing and shifting shoreline assets as SCAT's recommend/UCS approve.

Overflights continue. All Clean Seas vessels and the California Responder are secured. All Clean Coastal Waters assets and three VOSS' remain on-scene.

Temporary storage and disposal of cleanup debris is being addressed.

**10) Day 4.**

Demobilizing and shifting shoreline assets as SCAT's recommend/FOSC approves. SCAT's evaluating reported sheen impacts from El Segundo down to Palos Verdes Point.

All elements of UCS continue applicable efforts.

Three VOSS' secured.

**11) Day 5.**

Demobilize shoreline assets as SCAT's recommend/FOSC approves.

Ten Fishing Vessels secured.

Clean Waters I and Spirit secured.

**12) Day 6.**

Demobilize shoreline assets as SCAT's recommend/FOSC approves. Continuing beach surveys.

All on-water recovery ops secured.

**13) Day 7 - demobilize.**

Demobilize staging areas and shoreline ops as areas are cleaned.

**14) Major Resource Requirements.**

Malibu/Topanga Beaches - 1,000 feet of boom; 1,000 workers.

Santa Monica Beaches/area - 5,000 feet of boom; 1,000 workers.

Offshore/Open-water - 20,000 feet of boom

Seven major OSRVs and boat crews, eleven Navy Supsalv vessels, and at least two tugs and barges to transfer to.

**15) Shortfalls:**

a) Quantity and stockpiled dispersant may not be best dispersant for a given product. COREXIT 9527 is currently stockpiled. Availability of other dispersants unknown.

b) Availability of trained local volunteers and workers will be time-dependent. Initially, the number of trained volunteers and workers will be finite. As the spill progresses through time, OSHA training classes can be continuously conducted for arriving, untrained personnel. This scenario has identified a need for 2,000 trained shoreline workers.

c) Non-availability of small work boats and trained operators will limit efforts in the many inaccessible portions affected by this scenario (i.e. Santa Catalina, Palos Verdes Point, San Clemente Island).

d) Potential conflicts between investigative actions and cleanup efforts. For example, any legally imposed requirement associated with NRDA or recovered oil amount and effects may hamper/limit cleaning operations.

e) Uncertainty as to availability of cascable equipment due to regulations, permits, and operating limitations of industry in other areas from which the OSRVs are drawn. This scenario presumed the availability of all cascable 12 major OSRVs.

f) Offshore decontamination of vessels and equipment may be a regulatory issue whereby effective means of removing oil from vessels may be hampered. Vessels required to come into port for cleaning reduce time in active skimming ops, thus reducing further the derated capacity of the skimmers.

g) Deployment of public equipment, i.e. NSF OWOCRs (who/how) needs to be addressed. RP's not required to plan for this in current contingency plans.

## **APPENDIX IX MOST PROBABLE DISCHARGE (LOS ANGELES COUNTY)**

A. The Motor Vessel Slippery Deck is in the process of receiving bunkers (receiving fuel) to its outboard port bunker station from the

Tank Barge Floss 101, at Matson Container Terminal at L/A Berth 209. During this time the vessel discovers that approximately 100 gallons of IFO 180 (No.4 fuel oil) has overflowed out of the port fuel tank vents, of which approximately 30 gallons entered the waters of Los Angeles Harbor.

B. The incident occurs on June 12 at 0600. The winds are out of the NW AT 5-7 kts for the entire model spill.

C. Affected/potentially affected areas throughout the course of this scenario include:

1) Los Angeles Harbor, Berths 207-209;

D. The required response action elements are presented in chronological sequence. These include initial actions, spill response organization, containment and cleanup strategies, resource requirement, time necessary for cleanup, and criteria for terminating the event. The following response strategy for this scenario and the estimated times are for planning purposes only and do not reflect performance standards.

### **1) 01-02 Hours**

CG receives notification from the T/B Floss 101 via CH 16 at 0630, 12 June on behalf of the M/V Slippery Deck. The barge reports its location and situation as per above scenario, states that there has been a bunkering overflow, that they have shut down the transfer and that most of the oil is contained under the pier and within the previously deployed precautionary boom. The barge also states that although they are not accepting responsibility for the spill they have dispatched their Barge Tug Big

Spool to the scene in order to deploy additional boom to contain the oil.

CG initiated external and internal notifications including CA Office of Emergency Services (OES), CA Dept of Fish and Game (F&G) Los Angeles Fire Boat, Los Angeles Harbor Patrol, MSO Investigations Dept.

CG MSO LA/LB (predesignated Federal on Scene Coordinator (FOSC)) initiates pollution investigation efforts. Duty Pollution Investigators dispatched to scene to initiate pollution investigation and confirm cleanup actions needed. ETA for CG representatives is 15 minutes.

MSO LA/LB confirms if vessel/barge is of United States or foreign registry. M/V Slippery Deck agent contacted to meet with CG investigators on scene. CG investigators on scene contact MSO LA/LB, verify information set forth in scenario and identify spill path and probable RP. M/V Slippery Deck accepts responsibility for the cleanup, initiates vessel's contingency plan and hires Zoom & Boom cleanup contractors for the cleanup effort. MSO LA/LB dispatches second team to assist in coordination of cleanup effort/evidence gathering. Resources and estimated response time of hired Cleanup Contractors is as follows:

|                                   |            |
|-----------------------------------|------------|
| LA Fire Boat                      | +0.5 hours |
| Spill Container Vessel(Zoom&Boom) | +2.0 hours |
| 75 Contracted Laborers(Zoom&Boom) | +3.0 hours |
| 5 Ton Truck (Zoom&Boom)           | +2.0 hours |
| Vacuum Truck(Zoom&Boom)           | +3.0 hours |
| 2 Motorized boats(Zoom&Boom)      | +0.5 hours |
| Other Equipment(Zoom&Boom)        | +3.0 hours |

ACP Commsplan in standby

District Eleven public affairs staff briefed by MSO LA/LB in the event of inquiries.

## **2) 2-3 hours.**

MSO LA/LB receives report from CG Investigators and F&G on-scene that early preventative booming by barge tug has all of the oil, with the exception of minor sheen, contained and stable beneath LA Berths 207-209 and that there is no substantial threat to wildlife.

RP/CG, with the assistance of local public works officials, verifies that there are no facilities with water intakes in the area.

Evaluation of ship's diagrams, records and logs by CG and RP reveal that the cause of the spill was due to improper valve operations which caused the #3 port fuel tank to overflow aboard the M/V Slippery Deck.

## **3) 3-4 hours.**

Health and safety issues of site safety plan for response personnel, cleanup contractors and community-at-large identified and addressed.

Port notified of cleanup zone, safety zone established necessary, Broadcast Notice to Mariners if necessary.

Response resources arrive on-scene. (# Zoom & Boom spill container vessel, vacuum truck, 5 ton truck, 75 subcontracted laborers, and all other equipment mentioned above as per scenario arrives.)

Cleanup staging operations activated, cleanup activities strategy by RP based on input from CG, F & G, Contractors, and current information. Staging area established pier side LA Berth 211.

**4) 4-6 hours.**

Cleanup operations commence. Placement of additional hard booming with sorbents to separate affected areas on pier from vessels involved and to minimize sheening. Vacuum truck commences skimming of oil on surface water beneath affected piers. 75 laborers in punt boats work sorbents, guide vacuum nozzle, and commence pier piling and rock isolation for hand wipe cleanup.

**5) 6-12 hours.**

Most of the heavy, water-borne oil has been removed. The M/V Slippery Deck and Tank Barge Floss 101 are outside the boom undergoing hull stain and deck cleaning.

**6) 12-18 hours.**

Waterside cleanup of pier pilings 90% completed and all heavy oil, except for sheen, recovered from water. Tank Barge Floss 101 deemed clean and allowed to depart. Examination of deck indicates that side cleaning of M/V Slippery Deck indicates that additional cleaning is necessary. Hand degreaser is used on ladders, handrails and walkways.

**7) Day Two 18-24 hours**

Final details of cleanup operation continue. Contractor commences removal of solid sorbent waste from water to authorized containers on pier for later transport.

Morning evaluation of cleanup and meeting of CG, RP, F&G, and cleanup contractors conducted on scene. The meeting has determined that only small amounts of light sheen remain in water with all heavy staining removed from adjacent rocks and pier pilings. It was also determined that the M/V Slippery Deck was satisfactorily cleaned and would be allowed to shift berth pending continued investigation and possible civil penalties.

Final determination of meeting members after thorough waterside inspection is that all cleanup efforts can be secured.

**8) Potential Shortfalls:**

Slow on-scene availability and reliability of subcontracted trained labor crews, due to union conflicts.

General slow response of contractors to scene for rapid boom deployment as a key issue.

Proper nighttime boom monitoring by contractors for tidal changes to often improperly

monitored, allowing unidentified amounts of oil to escape.

Subcontracted night lighting fixtures often not effective or cost effective for nighttime cleanup. Suspend night cleanup until day if possible.

Coordination of pier piling cleanup with low tide accessibility beneath piers, requires high manpower consideration and cost.

All deemed completions of cleanups confirmed by thorough waterside inspections beneath piers and consensus of involved parties.

All aspects of cleanup operations should be conducted and concluded by all parties involved in a response including federal, state, local agencies; responsible parties; and the contractor.

## **APPENDIX X MOST PROBABLE DISCHARGE (ORANGE COUNTY)**

A. The Motor Vessel “No Problema,” a private 38 foot pleasure craft is in the process of returning to its private dock in Bayshores, Newport Beach. During this time the owner discovers a small shaft leak with about 15 gallons of diesel fuel and water mixture in his engine compartment. The owner turns on the vessel’s overboard discharge pump and retires his vessel to the dock for morning repairs. The next morning the owner’s wife discovers the vessel has sank and that a flow of diesel fuel from the vessel’s engine room has formed a pool of approximately 5 gallons on the surface of the water.

B. The incident occurs on August 12 at 1200. The winds are out of the NW at 5-7 kts with daytime temperatures of 80 degrees for the entire model spill.

C. Affected/potentially affected areas throughout the course of this scenario include:

1) Newport Beach Harbor, private boat slip 44;

D. The required response action elements are presented in chronological sequence. These include initial actions, spill response organization, containment and clean-up strategies, terminating the event. The following response strategy for this scenario and the estimated times are for planning purposes only and do not reflect performance standards.

### **1) 01-02 hours.**

CG receives notification from the Newport Harbor Patrol via land line at 1230, 12 June on behalf of the owner of the sunken vessel Mr. Richard Wealthman. The Harbor Patrol reports the vessel’s location and situation as per above scenario, and that about five gallons of diesel which had escaped from the vessel’s engine room was contained within a 200 ft boom they had deployed.

CG initiated external and internal notifications including CA Office of Emergency Services (OES), CA Dept of Fish and Game (F&G) Orange County Water Quality.

CG MSO LA/LB (predesignated Federal on Scene Coordinator (FOSC)) initiates pollution investigation efforts. Duty Pollution Investigators dispatched to scene to initiate pollution investigation and confirm clean-up actions needed. ETA for CG representatives is 45 minutes.

MSO LA/LB confirms vessel ownership by state boating number. The owner of the sunk vessel Mr. Richard Wealthman is contacted to meet with CG investigators upon arrival on scene.

CG investigators on scene contact MSO LA/LB, verify information set forth in scenario, identify spill path, and identify probable RP as Mr. Richard Wealthman. Richard Wealthman accepts responsibility for the incident, and hires Newport Shipyard to salvage the vessel and Zoom & Boom for the clean-up. MSO LA/LB investigators on scene continue routine evidence gathering and monitoring of situation.

Resources and estimated response time of hired cleanup and salvage contractors is as follows:

|                                        |            |
|----------------------------------------|------------|
| Newport Harbor Patrol                  | +0.4 hours |
| 2 Response boats (Zoom & Boom)         | +2.5 hours |
| 45 ft Salvage vessel (Newport Salvage) | +2.5 hours |
| ACP Commsplan in standby.              |            |

District Eleven public affairs staff briefed by MSO LA/LB in the event of inquiries.

## **2) 2-3 hours.**

Health and safety issues of site safety plan for response personnel, cleanup contractors and community-at-large identified and addressed by CG and local authorities on-scene.

MSO LA/LB receives report from CG Investigators and F&G on scene that early preventative booming by Newport Harbor Patrol has all of the diesel fuel, with the exception of minor sheen, contained within the sunken vessel's slip, that the onboard fuel tank is not leaking and that no additional residual fuel is leaking from the engine compartment. F&G confirms a low threat risk to wildlife.

RP/CG, with the assistance of local public works officials, verifies that there are no water intakes in the area.

Further questioning of RP reveals that the cause of the sinking was due to earlier plugging of the vessel's overboard discharge port for maintenance purposes which had been forgotten.

Local residences notified of cleanup zone, safety zone established if necessary, Broadcast Notice to Mariners made, if necessary.

## **3) 3-4 hours.**

Response resources arriving on-scene; Zoom & Boom fast response vessels with

related recovery and cleanup equipment onboard, Newport Salvage 40 foot salvage vessel with related equipment.

Cleanup and salvage staging operations initiated.

Planning strategy by RP based on input from CG, F&G, Contractors and current information. Staging area established adjacent to sunken vessel slip #44.

Vessel recovery and clean-up operations commence. Placement of additional hard booming with sorbents to separate affected areas from vessels involved and to minimize sheening. Salvage vessel commences lifting of sunk vessel. Clean-up contractor works sorbents, and commences slip cleanup.

**4) 4-6 hours.**

Most of the heavy waterborne oil has been removed. The M/V “No Problema” has been raised and is undergoing hull stain and deck cleaning.

**5) 6-8 hours.**

Waterside cleanup 90% completed and all diesel, except for light sheen, recovered from water. M/V “No Problema” deemed clean and stable.

**6) 8-10 hours.**

Final details of clean-up operation continue. Contractor commences removal of solid sorbent waste from water to authorized containers in response vessels for later transport.

Evaluation of cleanup and meeting of CG, RP, F&G, and cleanup contractors conducted on scene. The meeting has determined that only small amounts of light sheen remain in the water with all heavy staining removed from adjacent areas. It was also determined that the M/V “No Problema” was satisfactorily cleaned and stabilized with all fuel and oils removed. The vessel would be allowed to be taken in tow to repair facility pending continued investigation and possible civil penalties.

Final determination of meeting members after thorough waterside inspection is that all cleanup efforts can be secured.

**7) Potential Shortfalls:**

General slow response of contractors to scene for rapid boom deployment as a key issue.

All aspects of cleanup operations should be conducted and concluded by all parties involved in a response including federal, state, local agencies; responsible party; and the contractor.

## **APPENDIX XI POTENTIAL RESOURCE SHORTFALL ANALYSIS (SOUTHERN SECTOR)**



Potential resource shortfall analysis, per COMDTNOTE 16471 dated 14 Sep 1991, was undertaken by planning participants to determine improvements needed to enhance preparedness during the first 72 hours of a spill. Two separate approaches were taken in this analysis. First, general shortfall areas were identified which included technology, personnel preparedness, access, etc. Second, evaluations based on spill scenarios were used to assess the adequacy of shoreline resource protection responses. The objective was to evaluate the correlation between availability of protection resources and personnel and the impact of spills. Thus, the analysis included timing issues (i.e. deployment, resource location) as well as actual physical resources.

## **GENERAL SHORTFALL CATEGORIES**

The following categories provide convenient categories of the general shortfalls.

### **Beach Access Shortfalls**

- Catalina Island has many sites that are only accessible by boat or by repelling down cliff faces. Also, Catalina has limited roads, especially around the coast line. Movement of equipment, supplies and personnel would be very difficult.
- A similar situation exists on San Nicholas Island with the exception that there are numerous roads. Both islands have landing strips, although, Catalina's is very limited in the size of planes it can handle.

## **TECHNOLOGY SHORTFALLS**

- Booming and collection technology is insufficient to keep oil from vital (sensitive) areas in strong currents, e.g.. tidal marshes.
- No technology exists to exclude oil from the many miles of coastal sand beaches with moderate to high energy regimes.
- Zones, in State waters, have not yet been identified for dispersants "quick approval."
- The dispersants stockpiled in this area have little efficacy on the oils most likely to be spilled in this area.
- Permitting of in-situ burning is still unresolved.
- No fire-boom is available for in-situ burning.

### **Wildlife Care and Rehabilitation**

There are substantial shortfalls for wildlife care and rehabilitation. This is an urgent issue because of level of concern and volatility of public toward this area.

The OSPR Guidance Document "For Oiled Wildlife Care" released in 1993 reported on the existing capabilities of wildlife rehabilitation organizations in California to rescue, transport, clean, treat and rehabilitate oiled marine wildlife. The results were based upon surveys, site visits by OSPR staff, and information provided by the organizations.

In a separate analysis, OSPR used information concerning the numbers of marine wildlife rescued during recent west coast oil spills, the distribution and abundance of California's marine birds and mammals, their vulnerability to oil, and their proximity to areas of special concern for oil spill risk to project probable rehabilitation case loads. The differences between existing capabilities and projected case loads represent the shortfall in oil spill response capabilities at this time.

California legislation enacted in 1993 would create an oiled wildlife care network by 1997 if funding is forthcoming. At the present time, however, under any spill scenario, existing capabilities fall far short of anticipated wildlife rehabilitation case loads.

Facilities and shortfalls for the Los Angeles and Orange County Planning areas have been identified as follows:

-Los Angeles. Existing emergency capabilities can support care for about 750 birds within 48-72 hours. OSPR has projected rehabilitation case loads of up to 2000 birds. There is a deficiency of supplies, materials, equipment, and facilities for providing care for about 1250 birds.

-Orange County. Existing emergency capabilities can support care for about 25 birds within 48-72 hours. OSPR has projected rehabilitation case loads of up to 1000 birds. There is currently a deficiency of supplies, materials, equipment, and facilities for providing care for about 975 birds.

It is likely that all facilities in both areas would be mobilized in the event of a spill. The projected joint case loads would be 3000 with current resources for about 775 cases leaving a shortfall of about 2225 for Los Angeles and Orange County areas combined.

Marine mammal care facilities are available at the Marine Mammal Care Facility at Fort MacArthur. However, seasonally the facility reaches capacity. There are no provisions to care for additional oiled marine mammals.

## **PERSONNEL SHORTFALLS**

- There is no mechanism for maintaining a large cadre of trained cleanup responders. Due to OSHA and other regulations, there is often a lag-time in cleanup response while mandated training is conducted.
- The number of field staff in OSPR is minimal relative to the demands inherent to large spills, and quite inadequate in the event of either a SONS spill or two concurrent spills.
- The mechanism for incorporating volunteers is evolving very slowly. Dealing with volunteers is sensitive issue similar to that of wildlife care. It is important to develop a plan to give a positive and proactive opportunity to convergent volunteers. Due to extensive training requirements, few of these volunteers can be involved in hands on wildlife work. So, it is important to identify other roles in which they can function and the appropriate training necessary. Supervision and liability issues must also be addressed.

## **PIPELINES**

- Shoreside facilities account for an increasing number of recent spills. The majority of these have been from pipeline breaks. Typically, these breaks are the result of aging and/or poorly maintained lines and facilities. Better technology is needed to detect potential leaks and to enable quicker shut down of the pipeline when breaks occur.
- There is poor contingency (response) planning for inland pipeline spills that may affect marine waters and coastal marshes. Great amounts of time have been spent planning for pollution threats from the ocean-side of marshes. Yet, very little time has been spent planning for shoreside oil threats, which are more common than ocean-side threats.

## **SCENARIO-DRIVEN SHORTFALL ANALYSIS**

This analysis permits a critical look at response capacity for protection of adjacent resource sites in the face of an expanding oil slick.

### **RATIONALE FOR SPILL SCENARIO SELECTION**

Since no one spill realistically taxes the response capacity along the entire reach, several representative scenarios were selected. The three scenarios included were selected to evaluate response capacity to protect significant resource sites at different locations along the coast. One scenario was selected to evaluate protection responses for each of the following areas: Santa Monica Bay (Malibu Lagoon); L.A.-Long Beach harbor area (Cabrillo wetlands & Anaheim Bay); and Orange County (Anaheim Bay/Bolsa Chica).

A further criterion for scenario selection was proximity to sensitive resources. Spill scenarios with origins near significant ecological resource sites were the best test of response capacity because impacts were more imminent. This criterion influenced the selection of scenarios for Los Angeles-Long Beach area and Orange County.

### **SPILL SCENARIOS SELECTED**

Scenarios were selected from among the trajectories included in the Clean Coastal Waters' Regional Resource Manual (RRM, section 202). Scenarios were selected to evaluate protection of different sensitive resource sites in the ACP's.

For example, since Anaheim Bay has preeminent ecological value in this region, a scenario was selected from among the three scenarios in the RRM having rapid impacts on Anaheim Bay:

100,000 bbl spill at the eastern end of the Long Beach breakwater  
(see CCW RRM, page 202-46)

This scenario (designated Scenario 3, hereafter S-3) was selected in preference to one at the site of the American Trader spill. This scenario permits evaluation of rapid response necessary to deploy protection at Anaheim Bay and Alamitos Bay simultaneously. Thus, it was deemed the more demanding contingency for the Orange County coast.

For the L.A.-Long Beach area, a spill at the mouth of Dominguez Channel was used to evaluate fast response to minimize impacts at Cabrillo Wetlands and inner Cabrillo Beach. A 2000/87,500 bbl spill at mouth of Dominguez Channel L.A. Harbor (see CCW RRM, page 202-28/202-48) was designated Scenario-2 (S-2). For the Santa Monica Bay area, the third scenario in ACP Appendix III was selected: a 3000 bbl North Slope Crude spill at El Segundo marine terminal. A similar scenario in the CCW RRM (pages 202-14,40) for volumes of 2000 and 250,000 bbl was used to compute times of impact at sites in that area. This scenario was selected because of its high likelihood and because it is already specified for Santa Monica in the ACP.

### **APPLICATION OF SCENARIOS TO SHORTFALL ANALYSIS**

Once a spill scenario was selected, the zone covered in each 24 hour increment was used to calculate a rate of oil movement per hour. The distance from the spill origin to each site was also measured. From these, the time from spill to impact was calculated. Differences in rates of oil movement up-coast verses down-coast were included. However, if there was any uncertainty about appropriate rates, the fastest rate was used to develop the faster time of projected impact. (It is interesting to note that the projected time and extent of area covered by slicks is not substantially different based on volume included in the scenario; see RRM, section 202.)

Some sites could be impacted by more than one scenario. In that case, both projected impact times were considered in the matrix. This was most evident at Anaheim Bay, where large spills near the Bay require commitment of significantly more resources (eg. Lori skimmers) to deal with large volumes of convergent oil.

The sites are listed on the matrix. Calculated time of impact is entered for the spill scenario(s) which impact the site. Resource/personnel needs taken from ACP's and RRM were entered in the resources/personnel needed reasonably capable of deployment within the times indicated. A shortfall is identified whenever resources/personnel can not realistically deploy before the projected time to impact.

### **MATRIX SHORTFALL ANALYSIS FOR SPILL SCENARIOS**

In general, the shortfall matrix reemphasizes the inadequacy of current booming technology to protect moderate and high energy shorelines from oiling. For this reason most sites have no protective measures proposed and no site-specific shortfalls. Pre-cleaning and cleanup are the only actions available.

A shortfall was identified at Cabrillo Wetland. Although boom is stationed on site, the best protective response for this site would be a sediment dike. There is no clear mechanism to get equipment to that site nor is there culvert available to construct a sediment dike within the projected four to five hour response frame. Such equipment and material must be pre-identified and arrangements firmed to enable rapid response. Other sites requiring sediment berming are likely to be impacted at sufficiently extended time frames that any number of sources of equipment and material could be mobilized to meet needs.

At Anaheim Bay where large tidal exchanges maximize opportunity for oil entrainment, rapid skimmer deployment on site is a possible shortfall. While deployment of protective boom to this and sites like Cabrillo Beach and Wetlands is feasible within projected time frames, moving skimmers to sites will require additional time. Whenever there is a substantial tidal exchange capable of entraining pooled oil, rapid arrival of skimmers will be essential to effectiveness of booming.

# Annex J

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**ANNEX J OPERATIONS**

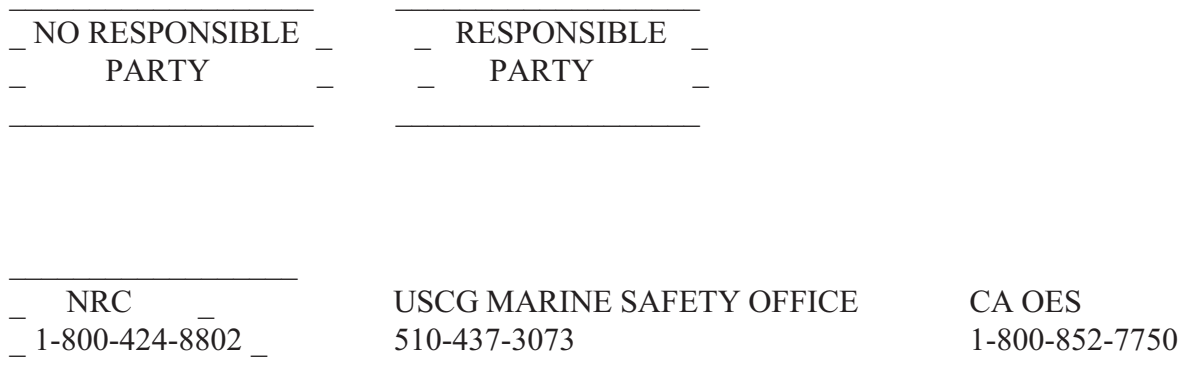
**APPENDIX II CHECKOFF LIST**

**TAB A NOTIFICATION OF SPILL INCIDENT**

A substantial spill of oil usually has a responsible party (RP) who is aware that the discharge has occurred (as in the case of a vessel grounding or collision, or a tank or pipeline rupture at a facility, for example).

The party responsible for a discharge of oil into the navigable waters of the United States is required by federal law (40 CFR Part 302) to immediately report the discharge to the Coast Guard; and if the discharge occurs within the waters of the state of California, by state law to report it to the state. Responsible parties meet their requirement under federal law by reporting the spill to the National Response Center or to Coast Guard Marine Safety Office San Francisco Bay. State law requires the report to be made to the Office of Emergency Services.

However, reports of oil spills (usually smaller ones) are often made by persons other than the responsible party directly to MSO San Francisco Bay or to the NRC. The diagram below depicts the ways that the initial notification of an oil spill can be received, and the notification protocol that exists among the federal and state principals.



Information to be collected and passed as part of the notification procedure is listed on the Incident Information Form (Figure J-II-A-1). The minimum information required to be passed is indicated by an asterick (\*) on the form.

Figure J-II-A-2 designates responsibility and ensures accountability for the notification of other federal and state agencies and non-profit/public interest groups. The intent is to show the chain of responsibility for notifications, rather than a specific notification checkoff list intended for use by all parties. No attempt has been made to represent the complete notification lists used by state and local government emergency contacts.

**INCIDENT INFORMATION**

NAME/CALL BACK NUMBER OF PERSON REPORTING THE INCIDENT\* \_\_\_\_\_

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**VESSEL/FACILITY INFORMATION AND POINTS OF CONTACT**

VESSEL NAME\* \_\_\_\_\_ NUMBER OF CREW/PASSENGERS \_\_\_\_\_

VESSEL LOCATION \_\_\_\_\_

TYPE OF VESSEL: ☐ TANKER ☐ BARGE ☐ CARGO ☐ OTHER: \_\_\_\_\_ FLAG\* \_\_\_\_\_

AGENT \_\_\_\_\_ PHONE \_\_\_\_\_

VESSEL OWNER\* \_\_\_\_\_ PHONE \_\_\_\_\_

VESSEL OPERATOR/CHARTERER \_\_\_\_\_ PHONE \_\_\_\_\_

LAST PORT OF CALL \_\_\_\_\_ DESTINATION \_\_\_\_\_

PARTICULARS: LENGTH \_\_\_\_\_ FT, TONNAGE (GROSS/NET/DWT) \_\_\_\_\_ / DRAFT FWD: \_\_\_\_\_ AFT: \_\_\_\_\_, YR BUILT \_\_\_\_\_

TYPE OF HULL: ☐ SINGLE ☐ DOUBLE ☐ DOUBLE BOTTOM ☐ DOUBBLE SIDED

HULL MATERIAL \_\_\_\_\_

TYPE OF PROPULSION: ☐ DIESEL ☐ STEAM ☐ GAS TURBINE ☐ NUCLEAR ☐ OTHER \_\_\_\_\_

PETROLEUM PRODUCT(S) ONBOARD: ☐ YES ☐ NO

TYPE OF CARGO \_\_\_\_\_ TOTAL # OF TANKS ON VSL \_\_\_\_\_

TOTAL QUANTITY \_\_\_\_\_ BARRELS X 42 = \_\_\_\_\_ GALLONS / TOTAL CAPACITY \_\_\_\_\_ BARRELS

TYPE OF FUEL \_\_\_\_\_ QUANTITY ON BOARD \_\_\_\_\_ BARRELS

**INCIDENT INFORMATION\*** **DATE:** \_\_\_\_\_ **TIME:** \_\_\_\_\_

LOCATION \_\_\_\_\_ LAT/LONG: \_\_\_\_\_

TYPE OF CASUALTY: ☐ GROUNDING ☐ COLLISION ☐ ALLISION ☐ EXPLOSION ☐ FIRE

☐ OTHER \_\_\_\_\_

NUMBER OF TANKS IMPACTED \_\_\_\_\_ TOTAL CAPACITY OF AFFECTED TANKS \_\_\_\_\_

MATERIAL SPILLED \_\_\_\_\_ VISCOSITY \_\_\_\_\_

EST. QUANTITY SPILLED \_\_\_\_\_ (GALLONS/BARRELS) CLASSIFICATION: ☐ MINOR ☐ MEDIUM ☐ MAJOR

SOURCE SECURED? ☐ YES ☐ NO IF NOT, EST. SPILL RATE: \_\_\_\_\_ BARRELS(GALLONS)/HOUR

**INCIDENT STATUS**

INJURIES/CASUALTIES \_\_\_\_\_ ☐ SAR UNDERWAY

VESSEL STATUS: ☐ SUNK ☐ AGROUND ☐ DEAD IN WATER: SET AND DRIFT \_\_\_\_\_

☐ ANCHORED ☐ BERTHED ☐ UNDER TOW: EST TIME TO DOCK/ANCHOR \_\_\_\_\_

☐ ENROUTE TO ANCHORAGE/BERTH UNDER OWN POWER: EST TIME OF ARRIVAL \_\_\_\_\_

☐ HOLED: ☐ ABOVE WATERLINE ☐ BELOW WATERLINE ☐ AT WATERLINE APPROX. SIZE OF HOLE \_\_\_\_\_

☐ FIRE: ☐ EXTINGUISHED ☐ BURNING ☐ ASSISTANCE: ENROUTE/ON-SCENE \_\_\_\_\_

☐ FLOODING ☐ DEWATERING ☐ LIGHTERING ☐ ASSISTANCE: ENROUTE/ON-SCENE \_\_\_\_\_

☐ LIST: ☐ PORT ☐ STARBOARD DEGREES \_\_\_\_\_ TRIM: ☐ BOW ☐ STERN

**WEATHER\***

WIND \_\_\_\_\_ KTS, DIRECTION \_\_\_\_\_ AIR TEMPERATURE \_\_\_\_\_ F, WATER TEMPERATURE \_\_\_\_\_ F

WAVE HEIGHT \_\_\_\_\_ FT, DIRECTION \_\_\_\_\_ SWELLS \_\_\_\_\_ FT, DIRECTION \_\_\_\_\_

CURRENT \_\_\_\_\_ KTS, DIRECTION \_\_\_\_\_

TIDE: ☐ SLACK ☐ FLOOD ☐ EBB HIGH TIDE AT \_\_\_\_\_ HRS, LOW AT \_\_\_\_\_ HRS.

## NOTIFICATION TABLE\*

| AGENCY/GROUP                         | RESPONSIBLE FOR NOTIFYING:                            |                     |
|--------------------------------------|-------------------------------------------------------|---------------------|
| CG MSO San Francisco                 | CA OES                                                | 800-852-7750 (24hr) |
|                                      | Date/Time: _____                                      |                     |
|                                      | Person Notified: _____                                |                     |
|                                      | CG District 11 OPCEN                                  | 310-980-4400 (24hr) |
|                                      | Date/Time: _____                                      |                     |
|                                      | Person Notified: _____                                |                     |
|                                      | NOAA SSC                                              | 310-980-4107 or     |
|                                      | Date/Time: _____                                      | 800-759-7243 (Pgr)  |
|                                      | PIN 5798818                                           |                     |
|                                      | US Navy                                               | 415-395-5554 (24hr) |
|                                      | Date/Time: _____                                      |                     |
|                                      | Person Notified: _____                                |                     |
| USCG Group/Airsta Humboldt Bay       | USCG Group/Air Station Humboldt Bay                   | 707-839-6116(24hr)  |
|                                      | Date/Time: _____                                      |                     |
|                                      | Person Notified: _____                                |                     |
|                                      | USCG Public Affairs (nr)                              | 510-437-3324        |
|                                      | Date/Time: _____                                      |                     |
|                                      | Person Notified: _____                                |                     |
|                                      | USCG Group/Airsta Humboldt Bay                        |                     |
|                                      | USCG MSO San Francisco Bay                            | 510-437-3073(24hr)  |
|                                      | CA Office of Emergency Services (OES)                 |                     |
|                                      | USCG MSO San Francisco                                | 510-437-3073(24hr)  |
|                                      | OSPR (dispatch)                                       | 916-445-0045(24hr)  |
|                                      | County OES(s) (or designated local emergency contact) |                     |
| Regional Water Quality Control Board | Regional Water Quality Control Board                  | 800-852-7550(24hr)  |
|                                      | CA Dept. of Parks & Recreation                        | 800-548-1432(24hr)  |
|                                      | CA Coastal Commission                                 | 415-904-5250        |
|                                      | CA State Lands Commission                             | 800-852-7550(24hr)  |
|                                      |                                                       |                     |

\*This table is intended to show notification responsibilities only. It is not a detailed notification “checklist.”



**AGENCY/GROUP**

CA OES (cont'd)

**RESPONSIBLE FOR NOTIFYING:**

CA EPA, Dept. of Toxic Substance Control

CALTRANS

510-286-0315(24hr)

California Highway Patrol (CHP)

707-648-5550(24hr)

\*\* Other agencies as prescribed by state  
notification system

County OES          County Health Department(s)  
(or designated local  
emergency contact)   County Fire Department(s)

County &amp; City Police Department(s)

Harbormaster(s)/Port Authority(s)

\*\* Other agencies and groups as prescribed  
by county notification system

\*\* owners/operators/trustees of property  
or facilities potentially impacted

Harbormaster(s)/Fisherman's Organization(s)  
Port Authority(s)

\*This table is intended to show notification responsibilities only. It is not a detailed notification  
"checklist."

**AGENCY/GROUP**

USCG 11th District

**RESPONSIBLE FOR NOTIFYING:**

USCG Pacific Area OPCEN

OPCEN          Date/Time: \_\_\_\_\_

Person Notified: \_\_\_\_\_

USCG Pacific Strike Team

415-883-3311(24hr)

Date/Time: \_\_\_\_\_

Person Notified: \_\_\_\_\_

USCG Group Humboldt Bay/San Francisco

Date/Time: \_\_\_\_\_

Person Notified: \_\_\_\_\_

OSPR

International Bird Rescue Research Center  
(IBRRC) 510-841-9086(24hr)

State Interagency Oil Spill Committee  
(SIOSC) Confidential Notification List

NOAA SSC

U.S. Fish & Wildlife Service  
(appropriate field office)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

Farallones Nat'l Marine Sanctuary 415-556-3509  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

National Park Service/GGNRA 415-556-4462(24hr)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

IBRRC

Marine Mammal Center 415-289-7325(24hr)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

\*This table is intended to show notification responsibilities only. It is not a detailed notification "checklist."

**AGENCY/GROUP**

**RESPONSIBLE FOR NOTIFYING:**

IBRRC

Marine Mammal Center 415-289-7325(24hr)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

Pacific Wildlife Care Center(805-489-0411)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

Marine Mammal Center Friends of the Sea Otter 408-373-2747  
(9am-5pm)  
408-726-1750 (after 6pm)  
Date/Time: \_\_\_\_\_  
Person Notified: \_\_\_\_\_

Center for Marine Conservation 408-375-4509

Date/Time: \_\_\_\_\_

Person Notified: \_\_\_\_\_

Friends of the Sea Otter

Save Our Shores

408-462-5560 (day)

Date/Time: \_\_\_\_\_

408-423-5063 (after hrs.)

Person Notified: \_\_\_\_\_

\*This table is intended to show notification responsibilities only. It is not a detailed notification "checklist."

## **TAB B INITIAL RESPONSE**

The following initial assessment and response actions (first 2 hours after notification) will be carried out by Federal, State and Responsible Party Incident Commanders in response to the report of an oil spill equivalent to any worst case, major or potential major spill. It is envisioned that the various response organizations will initially activate their Operations Sections and Command Staffs of the Incident Command System. **All entities take action simultaneously to accomplish a rapid, effective and organized response.** This is the first step toward establishing a fully functioning Unified Command System.

### **GOALS TO BE ACCOMPLISHED DURING THE FIRST 2 HOURS:**

Ensure Personnel Safety  
Secure Source  
Complete Notifications  
Assess Situation: Magnitude, Severity, Threat  
Initiate Immediate Response Actions

### **INCIDENT COMMANDER:**

Federal, State, and Responsible Party (RP) Incident Commanders take the following immediate actions:

- \_\_\_ Complete Notification Cascade (TAB A above).
- \_\_\_ Activate the Operations Section of the ICS. The Operations Section takes the immediate actions as assigned below.
- \_\_\_ Activate the Command Staff. The Command Staff elements take the immediate actions as assigned below.
- \_\_\_ Obtain Initial Incident Status and Situation Assessment Briefings from Operations Section Chief and Command Staff.
- \_\_\_ Assess situation, determine priorities, establish strategic goals and tactical objectives, and assess response needs.
- \_\_\_ Identify team to consider use of alternate technologies, especially dispersants. Set goal for time of decision.
- \_\_\_ Develop initial Incident Action Plan and identify initial preplanned response strategies to implement.
- \_\_\_ OSC decides if the Oil Spill Liability Trust Fund is to be opened. State Incident Commander decides if the State Fund is to be opened.
- \_\_\_ Authorize information releases to the media and schedule initial press conference.
- \_\_\_ Review results of initial helicopter overflight of scene, and determine desired intensity of air operations.
- \_\_\_ Incident Commanders jointly establish a Unified Command organization, staffing and identify Command Post location.

### **OPERATIONS SECTION:**

- \_\_\_ Request Coast Guard Search and Rescue Mission Coordinator respond as needed.
- \_\_\_ Request Emergency Medical Services assistance as needed.

### **(EMS Operations will be performed and coordinated through existing local EMS systems.)**

- \_\_\_ Determine if pollution source can be secured and direct operations to secure, if possible.
- \_\_\_ Dispatch pollution response team.
- \_\_\_ Identify and document the discharge source and Responsible Party, if necessary.
- \_\_\_ Evaluate the severity of the incident Estimate window(s) of opportunity. (Figure J-II-B-1)
- \_\_\_ Conduct situation analysis including grounding, firefighting and salvage problems. (TABs K & L)
- \_\_\_ Conduct HAZMAT situation investigations, site surveys, air monitoring, and analyze HAZMAT problems, if any.
- \_\_\_ Direct and manage HAZMAT resources to accomplish tactical operational objectives, if necessary.
- \_\_\_ Determine current, tide and weather effects on the situation and product movement.
- \_\_\_ Initiate data collection and evaluation of option to use dispersants. Use dispersant checklist from Annex G.
- \_\_\_ Identify sites for immediate pre-cleaning. Identify personnel to conduct pre-cleaning operations.
- \_\_\_ Identify high priority areas for early protection. Select appropriate response strategies to implement from Annex E.
- \_\_\_ Estimate equipment required for initial response priorities. (Figure J-II-B-2)

- \_\_\_ Direct the delivery and deployment of first equipment to arrive on scene.
- \_\_\_ Consider dispatching liaisons to local Oil Spill Response Organization(s).
- \_\_\_ Identify safety hazards that may be present and report observations to the Safety Officer.
- \_\_\_ Brief Incident Commander, make recommendations concerning priorities, strategic goals and tactical objectives. Assist with development of the Immediate Incident Action Plan.
- \_\_\_ Recommend that the Oil Spill Liability Trust Fund or State Fund be opened, if necessary. Coast Guard to obtain Federal Project Number and ceiling if the federal fund is opened. (Annex C & TAB D of this Annex)
- \_\_\_ Arrange for initial CG helicopter overflight with Marine Safety Office observer and video link (or follow-up flight) for OSC, State and RP.
- \_\_\_ Ensure response teams issue appropriate Federal and State forms:
  - Letter of Federal Interest (CG)
  - Letter of Designation of Source (CG)
  - Directive/Administrative Order (CG)
  - Letter of Federal Assumption (CG)
- \_\_\_ Identify and request additional resource and logistics needs.
- \_\_\_ Suggest organization and staffing for the Operations Section of the Unified Command. (Annex B)

#### **SAFETY STAFF:**

- \_\_\_ Identify and evaluate immediate public health and safety risks, and fire/explosion hazards.
- \_\_\_ Recommend site control or evacuations to isolate public from possible exposure.
- \_\_\_ Assess environmental conditions, including air and water monitoring, and recommend immediate actions to be taken by first responders for protection of health and safety.
- \_\_\_ Determine if spill has weathered to grade “D” or below.
- \_\_\_ Verify that all agency personnel already mobilized for initial response have the OSHA training required to participate in response.
- \_\_\_ Conduct site safety evaluation and develop Site Safety Plan. (Annex H)
- \_\_\_ Recommend staffing level for Safety Staff to Unified Command.

#### **INVESTIGATION STAFF:**

- \_\_\_ Dispatch casualty investigator to scene:
  - To assist pollution team to identify source and RP.
  - To conduct drug testing (if applicable)
  - To secure statements, physical evidence, and samples.
- \_\_\_ Coordinate concurrent investigations and conduct cooperative investigations where appropriate. (Annex C, Appendix II, TAB D)
- \_\_\_ Recommend staffing level for Investigations to Unified Command.

#### **INFORMATION MANAGEMENT STAFF:**

- \_\_\_ Act as Historian and record all case-related information. Ensure that all response personnel are carefully documenting all response and incident information. (NOTE: **Initiating data capture immediately is key to efficiently and effectively preparing to write the after-action report.**)
- \_\_\_ Complete Initial Incident Information Sheet and pass to all responders. (Figure J-II-A-1)
- \_\_\_ Draft Pollution Report (POLREP) for release by FOSC.
- \_\_\_ Setup and maintain a crisis information status board, summary forms, display systems and any other methods to effectively manage response information.
- \_\_\_ Initiate central data collection and routing systems.

#### **PUBLIC AFFAIRS STAFF:**

- \_\_\_ Prepare initial press release to read:
  - “Yes, we have received a report of a spill and we are in the process of investigating. A formal press release will be prepared as soon as possible.”
- \_\_\_ Prepare more detailed press statement for future release. (Annex L)
- \_\_\_ Make initial arrangements for first press brief.
- \_\_\_ Organize and conduct Unified Command media briefings.

**LIAISON STAFF:**

- \_\_\_\_\_ Serve as the initial point of contact for participating response agencies and identify appropriate assignment to UCS system(s).
- \_\_\_\_\_ Receive and coordinate all calls from public and private entities offering assistance or requesting information.
- \_\_\_\_\_ Make recommendations to the Incident Commander on the organization, staffing and tasking for the future Unified Command System.
- \_\_\_\_\_ Maintain a spill response summary distribution list for all public and private entities requesting spill response status reports.
- \_\_\_\_\_ Resolve and identify to the UCS public and private concerns related to the status and effectiveness of the response.

**LEGAL STAFF:**

- \_\_\_\_\_ Provide legal advise to the Incident Commander in support of response decision making.

TIME: \_\_\_\_\_

**SITUATION ASSESSMENT**

DATE: \_\_\_\_\_

**URGENCY OF SITUATION:**

IMMEDIATE SAFETY CONCERNS OF PERSONNEL ON-SCENE:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

ACTIONS UNDERWAY TO ENSURE SAFETY: \_\_\_\_\_

POSSIBLE WORST CASE SCENARIO (S):

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**VESSEL SITUATION ASSESSMENT:** (ALSO SEE TABS L AND M)

WINDOWS OF OPPORTUNITY:

\_\_\_\_\_ HOURS UNTIL SHIP STRANDS  
\_\_\_\_\_ HOURS UNTIL WEATHER, SEAS, WIND, CURRENT WORSEN AND ACCELERATE WORST CASE  
\_\_\_\_\_ HOURS UNTIL SHIP SINKS  
\_\_\_\_\_ HOURS REQUIRED TO EXTINGUISH FIRE  
\_\_\_\_\_ HOURS UNTIL \_\_\_\_\_

ESTIMATED HOURS TO PREVENT WORST CASE SCENARIO

\_\_\_\_\_ HOURS TO DETERMINE REQUIRED RESOURCES  
\_\_\_\_\_ HOURS UNTIL REPAIRS COMPLETED/MACHINERY ON LINE  
\_\_\_\_\_ HOURS TO ARRANGE FOR DISPATCH OF APPROPRIATE RESOURCES  
\_\_\_\_\_ HOURS UNTIL TOWING/FIREFIGHTING/SALVAGE VESSELS ARRIVE  
\_\_\_\_\_ HOURS TO RIG TOW LINE, PUMPS, OTHER EQUIPMENT  
\_\_\_\_\_ HOURS \_\_\_\_\_

**SPILL THREAT**

ESTIMATED QUANTITY SPILLED: \_\_\_\_\_ / \_\_\_\_\_ GALLONS/BARRELS

ESTIMATED RATE OF RELEASE \_\_\_\_\_ ESTIMATED BY: [ ] SOUNDING [ ] GAUGING

FREQUENCY OF TANK READINGS: \_\_\_\_\_

ESTIMATED TIME TO SECURE SOURCE: \_\_\_\_\_ OBSTACLES TO SECURING SOURCE: \_\_\_\_\_

SPILL TRAJECTORY:

DIRECTION OF MOVEMENT: \_\_\_\_\_ EST. SURFACE AREA OF SLICK: \_\_\_\_\_

ESTIMATED TIME TO LANDFALL: \_\_\_\_\_

**MAJOR SENSITIVE SITES AT IMMEDIATE RISK:**

**TIME BEFORE IMPACT OCCURS**

(REFERENCE: ANNEX E)

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |
| 5. _____ | _____ |

## ESTIMATE OF EQUIPMENT REQUIRED

Notes: 1. Use a separate worksheet for each individual site requiring a response.  
2. See Annex F for complete local equipment listing.

SITE: \_\_\_\_\_

### **Boom:**

Type \_\_\_\_\_ Length \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Length \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Length \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Length \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Length \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

### **Skimmers:**

Type \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

### **Boats:**

LOA \_\_\_\_\_ HP \_\_\_\_\_ Radio Freq \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

LOA \_\_\_\_\_ HP \_\_\_\_\_ Radio Freq \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

LOA \_\_\_\_\_ HP \_\_\_\_\_ Radio Freq \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

### **Barges:**

Make \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Make \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Make \_\_\_\_\_ Capacity \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

### **Portable Pumps:**

Type \_\_\_\_\_ HP \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ HP \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ HP \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

### **Communication Equipment:**

Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_



Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_

Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_

Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_

Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Model \_\_\_\_\_ Number \_\_\_\_\_

Source \_\_\_\_\_ ETA \_\_\_\_\_

**Sorbents:**

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

**Other Equipment:**

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Type \_\_\_\_\_ Source \_\_\_\_\_ ETA \_\_\_\_\_

Staging Area: \_\_\_\_\_

**Transportation Support:**

|           | TYPE | NUMBER | SOURCE |
|-----------|------|--------|--------|
| Aircraft: |      |        |        |
|           |      |        |        |

|         |  |  |  |
|---------|--|--|--|
| Trucks: |  |  |  |
|         |  |  |  |
|         |  |  |  |

|        |  |  |  |
|--------|--|--|--|
| Other: |  |  |  |
|        |  |  |  |

Boat Launch: \_\_\_\_\_

**Number of Personnel for Response Equipment Support:**

Deploy Boom \_\_\_\_\_

Tend Boom \_\_\_\_\_

Operate Skimmer \_\_\_\_\_

Vessel/Boat Operation \_\_\_\_\_

Deploy Sorbent \_\_\_\_\_

Recover Sorbent \_\_\_\_\_

Other \_\_\_\_\_

Personnel Transportation: \_\_\_\_\_

## **TAB C CONTAINMENT, COUNTERMEASURES AND RECOVERY**

### **GOALS TO BE ACCOMPLISHED:**

Contain and Recover Spilled Product  
Deploy Appropriate Pollution Countermeasures  
Monitor and Evaluate Overall Response Strategy  
Develop Daily Incident Action Plans  
Establish Unified Command Post and Organization

### **UNIFIED COMMAND:**

The Federal On-Scene Coordinator (OSC), State, and Responsible Party (RP) Incident Commanders take these actions:

- \_\_\_ Designate Unified Command Post location. Establish Unified Command schedule and daily routine including times for over flights, press briefings, staff and daily Incident Action Plan briefings. (See suggested UCS schedule and agendas (Figures J-II-C-1 through J-II-C-4).
- \_\_\_ Ensure Unified Command personnel understand their responsibilities as described in Annex B and task Unified Command elements in accordance with these responsibilities.
- \_\_\_ Authorize the ordering and deployment of response resources.
- \_\_\_ Attend the Response Operations Status Briefing.
- \_\_\_ Conduct initial Press Briefing.

### **PLANNING SECTION CHIEF:**

- \_\_\_ Complete Incident Action Plan and brief Unified Command (Response Planning Briefing). Report on effectiveness of initial response actions underway.
- \_\_\_ Develop and recommend oil spill response activity priorities during early response phases to the Unified Command. (Figure J-II-C-5)
- \_\_\_ Attend Response Operations Status Brief.
- \_\_\_ Initiate response planning for day 2. Develop alternative strategies.

### **STRATEGY BRANCH:**

- \_\_\_ Assist Planning Section Chief develop natural resource protection priorities and protection strategies using Annex E and other references. Document strategy plans. (Figure J-II-C- 5)
- \_\_\_ Prepare and update alternative response strategies and tactical operations plans that anticipate changing requirements.
- \_\_\_ Identify and recommend additional resources and logistics needs.
- \_\_\_ Collect, analyze, and disseminate information about the situation as it progresses, including:
  - (a) personnel
  - (b) equipment
  - (c) facilities
  - (d) materials and supplies
  - (e) casualty information
  - (f) discharge information
  - (g) environmental observations and forecasts
  - (h) impacts to natural and economic resources; and
  - (i) the status of response operations
- \_\_\_ Complete the Situation Status Report Form, (Figure J-II-C-6), for briefings as needed.

### **TECHNICAL BRANCH:**

- \_\_\_ Finalize evaluation of appropriate opportunities to effectively use Alternative Response Technology (ART), including chemical countermeasures, in-situ burning, bioremediation. (Annex G)
- \_\_\_ Coordinate with Natural Resource Trustees to forecast, identify, and assess natural resource injuries. (Annex C, Appendix I, TAB D,F)
- \_\_\_ Provide the Planning Section Chief with a disposal Plan that details the collection, temporary storage, transportation, recycling, and disposal of all anticipated response wastes. (TAB E)
- \_\_\_ Provide scientific and technical information and analysis to support response planning and operations.

### **OPERATIONS SECTION CHIEF:**

- \_\_\_ Assist the Planning Section define strategic response goals and tactical operational objectives for the Incident Action Plan.
- \_\_\_ Develop detailed mission assignments, sortie schedules, duty lists to accomplish the operational objectives detailed in the Incident Action Plan.
- \_\_\_ Document, evaluate and report on response countermeasure efficiency.

\_\_\_ Provide feedback to Planning Section on field operations with recommendations for long or short-term plans to be developed.

\_\_\_ Brief Unified Command. (Response Operations Status Brief)

#### **RECOVERY/PROTECTION BRANCH:**

\_\_\_ Implement, in priority, the preplanned protection and recovery strategies identified in the Incident Action Plan.

\_\_\_ Deploy and maintain booms, dikes, or other protection devices as directed to accomplish protection, diversion, or containment strategies, and modify planned strategies as required by actual field conditions.

\_\_\_ Direct the deployment and operation of VOSS's, skimmers, vac trucks and other equipment and methods to effectively accomplish the tactical cleanup objectives of the Incident Action Plan.

\_\_\_ Identify field conditions effecting containment, skimming and other cleanup operations and counteract, if possible.

\_\_\_ Direct the collection, temporary storage, transportation, recycling and disposal of recovered wastes.

\_\_\_ Ensure that product which has been contained, diverted or collected is recovered and transferred to approved temporary storage sites. (Annex E, Appendix IV) and (TAB E)

\_\_\_ Manage temporary storage sites to prevent secondary discharges or cross contamination.

\_\_\_ Confirm the laboratory results characterizing the wastes as hazardous or non-hazardous, and prepare required RCRA manifests as required.

\_\_\_ Confirm the capacities of recycling or disposal sites.

\_\_\_ Identify decontamination needs and direct required cleaning/decontamination of vessels, equipment and personnel.

\_\_\_ Maintain up-to-date estimates of product recovered and volume of waste generated.

\_\_\_ Report on the status, efficiency and effectiveness of shoreside recovery, cleanup methods, and resources used to Operations Chief for daily briefings.

\_\_\_ Identify and request additional protection resource and logistics needs.

#### **AIR OPERATIONS BRANCH:**

\_\_\_ Request NOTAM to implement positive air space control. (Annex J, Appendix II, TAB I)

\_\_\_ Provide surveillance overflights as requested by Unified Command.

\_\_\_ Arrange for Coast Guards HU25B Airborne aircraft unless resources provided by RP.

\_\_\_ Request additional aircraft resources and release aircraft when authorized.

\_\_\_ Direct and coordinate air operations missions to conduct oil spill tracking, observation, and remote sensing.

\_\_\_ Coordinate mission tasking with scientific and technical observers. Ensure Air Operations do not result in scattering wildlife into oiled areas.

\_\_\_ Report oil spill tracking, observation, and remote sensing results and coordinate observation to direct operational activities.

\_\_\_ Conduct air operations missions to apply dispersants, chemical countermeasure, bioremediation, or other alternative response technologies as directed by the Operations Section Chief.

\_\_\_ Coordinate ground services and aircraft support.

\_\_\_ Identify and request additional logistics needs.

#### **SITE MANAGEMENT BRANCH:**

\_\_\_ Identify and prepare designated staging sites and facilitate the movement of response resources into operation.

\_\_\_ Develop and implement the Incident Security Plan.

\_\_\_ Develop safety zones, security zones, and vessel traffic management alternatives for approval by the Captain of the Port (COTP). (Annex J, Appendix II, TAB J)

\_\_\_ Coordinate and implement enforcement of safety zones, security zones, and vessel traffic management systems.

\_\_\_ Identify and request additional resources and logistics needs.

#### **WILDLIFE OPERATIONS BRANCH:**

\_\_\_ Coordinate wildlife recovery and capture operations. (Annex K)

\_\_\_ Establish wildlife rehabilitation centers and conduct rehabilitation operations.

\_\_\_ Maintain documentation on wildlife delivered for rehabilitation.

\_\_\_ Identify resources and logistics support requirements.

**LOGISTICS SECTION CHIEF:**

- \_\_\_ Ensure the prompt delivery of resources to support response operations. Early emphasis on the delivery of heavy response equipment and personnel, providing communications resources, and the continuous need for support services are the highest priorities.
- \_\_\_ Brief Unified Command. (Response Operations Status Brief)

**COMMUNICATIONS BRANCH:**

- \_\_\_ Request CG transportable communications center and set up PST comms van for interim.
- \_\_\_ Develop, implement, and coordinate the Incident Communications Plan.
- \_\_\_ Post diagram of comms system with frequency use information with Information Management Branch.
- \_\_\_ Deliver, issue, track, maintain, and support all communications resources.
- \_\_\_ Identify additional communications resources or logistics needs.

**SERVICE BRANCH:**

- \_\_\_ Provide and coordinate emergency and routine medical services to response personnel.
- \_\_\_ Provide and coordinate meals and subsistence support to response personnel.
- \_\_\_ Plan, document, and account for the number and type of meals required.
- \_\_\_ Establish kitchens, galleys, canteens, and other food services support locations.
- \_\_\_ Provide potable drinking water and other beverages required to support response operations.
- \_\_\_ Provide and coordinate berthing facilities assigned to response personnel.
- \_\_\_ Plan, document, and account for the number and type of berthing facilities required.
- \_\_\_ Maintain berthing quarters, and hotel contracts to provide sleeping, hygiene, and restroom facilities for response personnel.

**SUPPORT BRANCH:**

- \_\_\_ Deliver and coordinate the delivery of response equipment, material, and supplies with early emphasis on protective booms, boom boats and skimmers.
- \_\_\_ Maintain stocks of expendable supplies ready to be issued.
- \_\_\_ Issue personal protective equipment, ready gear bags, and expendable personal supplies to response personnel.
- \_\_\_ Coordinate the ordering and delivery of spare parts, supplies, materials, and other resources to meet response needs.
- \_\_\_ Provide and coordinate response facility locations, including Command Posts, staging sites, communications facilities, berthing, messing, and sanitary facilities, and other response facilities.
- \_\_\_ Operate and manage the “motor pool” of dedicated ground transportation vehicles.

**PERSONNEL BRANCH:**

- \_\_\_ Coordinate authorized response assignments made to qualified emergency response workers.
- \_\_\_ Determine personnel need for response, and identify source of personnel. Ensure personnel are properly trained, and health and safety issues addressed.
- \_\_\_ Plan, document, and account for response personnel assignments.
- \_\_\_ Develop and manage a Unified Command personal locator system (roster) to track the assignment and location, including phone numbers, of individual responders.
- \_\_\_ Develop and manage watch rotation assignments. Ensure watch schedule published and distributed to all personnel.
- \_\_\_ Manage and coordinate the processing of private individuals and public groups volunteering to perform response operations. (Annex F, Appendix II, TAB R)
- \_\_\_ Manage the training, qualification, and certification process needed to convert private volunteers into qualified emergency response workers. (TAB O)

**FINANCE SECTION CHIEF:**

- \_\_\_ Refer to TAB D of this Annex for Cost Documentation and Recovery checklist.
- \_\_\_ Provide, manage, coordinate, document, and account for access to response funding sources, including the Oil Spill Liability Trust Fund, Natural Resources Damage Assessment Fund, State of California funding sources and any other sources of response funding.

\_\_\_\_ Coordinate and ensure the proper completion of response cost accounting documentation. Ensure procedures are conducted in accordance with the National Pollution Fund Center Technical Operating Procedures (NPFCINST 16451.2).

\_\_\_\_ Coordinate and manage response ceilings, budgets and cost estimates.

\_\_\_\_ Serve as the primary contact to the National Pollution Funds Center (NPFC) and the NPFC Case Officer.

**CONTRACT BRANCH:**

\_\_\_\_ Negotiate, coordinate, document, and manage all contracts needed to support response operations.

\_\_\_\_ Manage, coordinate, document, and account for all procurement orders needed to support response operations.

\_\_\_\_ Manage, coordinate, document, and account for all payments made to support response operations.

**COST BRANCH:**

\_\_\_\_ Manage, coordinate, and perform cost documentation in accordance with OSLTF and State requirements to account for response costs. (TAB D)

\_\_\_\_ Plan, coordinate, document, and account for response costs based on the time personnel, equipment, and other resources are accountable to the response.

**SUGGESTED DAILY SCHEDULE OF EVENTS**

**UNIFIED COMMAND**

|                  |                                                             |
|------------------|-------------------------------------------------------------|
| <b>0600</b>      | Release POLREP (Information Management Staff)               |
| <b>0700</b>      | Release Press Statement (Public Affairs Staff)              |
| <b>0700-0730</b> | Staff Brief: Unified Command Staff                          |
| <b>1000-1100</b> | Response Operations Status Brief                            |
| <b>1100</b>      | Press Brief: Incident Commanders                            |
| <b>1300-1700</b> | Field Survey/Overflight                                     |
| <b>1700</b>      | Response Operations Status Brief<br>Response Planning Brief |
| <b>1800</b>      | Release POLREP (Information Management Staff)               |

**SUGGESTED DAILY SCHEDULE OF EVENTS**

**FIELD OPERATIONS**

|                  |                                                                        |
|------------------|------------------------------------------------------------------------|
| <b>0600-0630</b> | Forward Command Post Brief: Action Plan of the Day                     |
| <b>0600-1800</b> | Carry out Incident Action Plan of the Day                              |
| <b>0800</b>      | Situation Status Update to Unified Command Post*                       |
| <b>1300</b>      | Situation Status Update to Unified Command Post*                       |
| <b>1300-1700</b> | Field Survey/Overflight: Unified Commanders                            |
| <b>1600</b>      | Situation Status Update to Unified Command Post*                       |
| <b>1800</b>      | Forward Command Post Debrief<br>Review Next Day's Incident Action Plan |
| <b>2000</b>      | Situation Status Update to Unified Command Post*                       |
| <b>2000-0600</b> | Prepare for Next Day's Incident Action Plan                            |

\* These are brief situation status updates ("all boom deployed, 2 skimmers operational", etc) from field posts to the Operations Section Chief of Unified Command Post and will normally be communicated via telephone or fax.

## **STAFF BRIEF**

*[Purpose: The purpose of the daily Command Staff Brief is to communicate and discuss issues involving the internal Unified Command organization. For example, the Unified Command, including the Command Staff, is expected to grow or shrink based on operational needs. Internal structure and personnel assignments would be discussed and decided on at this meeting. Other items for the Command Staff include the effectiveness and efficiency of internal information management (routing/dissemination); issues involving the daily press brief; legal issues; etc. Once the organization is fully functioning, these meetings will occur with less frequency. It is envisioned that the Unified Commanders, Command Staff Chiefs, and the Operations, Logistics, Planning and Finance Chiefs would be present at this meeting.]*

## **SUGGESTED AGENDA**

### **BRIEFING ITEM**

### **BRIEFING BY**

- |                                                                                    |                       |
|------------------------------------------------------------------------------------|-----------------------|
| 1. Safety Issues<br>Site Safety Plan Update                                        | Safety Staff Chief    |
| 2. UCS Organization Changes<br>Public and Private Concerns<br>Other Liaison Issues | Liaison Staff         |
| 3. Joint Information Center Issues<br>Daily Press Briefing Issues/Concerns         | Public Affairs Staff  |
| 4. Investigation Status/Issues Update                                              | Investigations Staff  |
| 5. Status of Information Management System                                         | Info Management Staff |
| 6. Status/Update on Legal Issues                                                   | Legal Staff           |

## **RESPONSE OPERATIONS STATUS BRIEF**

*[Purpose: The purpose of the Daily Operations Brief is to communicate the status of all operations. This brief does not include future plans because these are developed in detail by the Planning Staff and presented/discussed during the after-noon brief. As the operational tempo subsides, the two briefings would be combined into one. The Unified Commanders, Command Staff Chiefs and the Planning, Operations, Logistics, and Finance Chiefs would attend this meeting. The Unified Commanders conduct the press brief immediately following this brief.]*

### **SUGGESTED AGENDA**

#### **BRIEFING ITEM**

#### **BRIEFING BY**

##### **1. OPERATIONS**

**Chief, Operations**

Situation Status Report\*  
Estimate of Total Oil Spilled  
Estimate of Total Oil Recovered  
Total On Water Equipment Resources Employed  
Total On Land Equipment Resources Employed  
Shoreline Status  
Status of Response Operations  
Current Field Conditions  
Wildlife Recovery Operations Update  
Status of Waste Management/Disposal Operations  
Future Recommendations for Planning and Logistics Sections

##### **2. LOGISTICS**

**Chief, Logistics**

Logistics Status Report  
Status of Communications: Resources and Needs  
Services Update: Medical, Food, Berthing, Restrooms  
Supplies: Status of Needs, Delivery, Inventory  
Facilities Update: Forward Command Post(s), UC Post  
Transportation: Status of Needs, Schedules, Resources  
Personnel: Numbers, Assignments, Volunteers  
Future Recommendations for Planning and Ops Sections

##### **3. FINANCE**

**Chief, Finance**

Finance Status Report:  
Contracts  
Expenditures  
Claims  
Future Recommendations

\*Completed Situation Status Report Form to be provided at each brief by the Planning Section.



## **RESPONSE PLANNING BRIEF**

*[Purpose: This brief is conducted immediately after the afternoon Response Operations Status Brief with the objectives of reviewing efforts to implement current Incident Action Plan of the Day and presenting the Response Plan for the next 24 hours. It is envisioned that the Unified Commanders, Command Staff Chiefs, and the Operations, Logistics, Planning and Finance Chiefs would be present at this meeting.]*

### **SUGGESTED AGENDA**

#### **BRIEFING ITEM**

#### **BRIEFING BY**

- |    |                                                                                                                                                                                                                                      |                  |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1. | Status of Efforts to Implement<br>Incident Action Plan of the Day<br>(last 24-hr)                                                                                                                                                    | Planning Section |
| 2. | Presentation of Incident Action Plan for<br>Next 24-hrs:<br>Strategic Objectives<br>Response Priorities<br>Key Assests Required to Achieve Goals<br>Weather Considerations<br>Alternative Strategies<br>Responsibilites for Elements |                  |
| 3. | Status of the General (long-range) Plan                                                                                                                                                                                              |                  |

### RESPONSE PRIORITIZATION:

**IMPLEMENT TACTICAL OBJECTIVES:** (Describe if preplanned strategies not implemented or nonexistent) Examples: Exclusionary, Diversionary or Containment Booming, Dike, Pre-clean Beach, etc.  
(Y/N)

**PREPLANNED STRATEGIES?**  
**(Y/N)**

### A. HUMAN HEALTH AND SAFETY:

[illegible]

### B. ENVIRONMENTALLY SENSITIVE AREAS:

[illegible]

### C. ECONOMICALLY SIGNIFICANT AREAS:

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |

SIGNATURES:

(RESPONSIBLE PARTY)

$$-(\text{KLF})_0 - (\text{FOSC})$$
$$\{(\text{OSPR})\}$$

DATE:

DATE:

DATE: \_\_\_\_\_  
DATE: \_\_\_\_\_

## UCS SITUATION STATUS REPORT

DATE/TIME:

OPERATIONAL PERIOD:

FROM: \_\_\_\_\_ TO: \_\_\_\_\_

| SPILL STATUS (ESTIMATED) |                     | WASTE MANAGEMENT   |             |              |             |
|--------------------------|---------------------|--------------------|-------------|--------------|-------------|
| DISPOSITION              | LAST 24 HRS TO DATE | TYPE               | RECOVERED   | STORED       | DISPOSED OF |
| TOTAL PRODUCT LOST       |                     | PRODUCT            |             |              |             |
| RECOVERED LIQUIDS        |                     | CONTAMINATED       |             |              |             |
| EVAPORATION              |                     | LIQUIDS            |             |              |             |
| NATURAL DISPERSION       |                     | LIQUIDS            |             |              |             |
| CHEMICAL DISPERSION      |                     | CONTAMINATED       |             |              |             |
| BURNED                   |                     | SOLIDS             |             |              |             |
| UNCONTAINED              |                     | SOLIDS             |             |              |             |
| ON LAND                  |                     | HAZARDOUS          |             |              |             |
| EQUIPMENT RESOURCES      |                     | MANPOWER RESOURCES |             |              |             |
| TYPE                     | ASSIGNED            | AVAILABLE          | AFFILIATION | INCIDENT CMD | POST        |

FIELD

|                  |                         |
|------------------|-------------------------|
| BOOM(X 1000FT)   | RESPONSIBLE PARTY       |
| SKIMMERS         | CONTRACT                |
| BOATS            | FEDERAL                 |
| VOSS             | COAST GUARD             |
| BARGES (STORAGE) | STATE                   |
| BARGES           | LOCAL                   |
| CARGO XFER PUMP  | VOLUNTEERS              |
| PORTABLE PUMPS   | OTHERS                  |
| VACUUM TRUCKS    | TOTAL:                  |
|                  | <u>SHORELINE IMPACT</u> |

MILES

| COMMUNICATIONS: | DEGREE OF IMPACT                            | TOTAL MILES AFFECTED | TOTAL TREATED |
|-----------------|---------------------------------------------|----------------------|---------------|
| HANDHELD RADIOS |                                             |                      |               |
| BASE STATIONS   | LIGHT                                       |                      |               |
| PORTABLE REPEAT | MEDIUM                                      |                      |               |
| MOBILE RADIOS   | HEAVY                                       |                      |               |
| TELEPHONES      | TOTAL:                                      |                      |               |
| COMPUTERS       | <u>PREDETERMINED STRATEGIES IMPLEMENTED</u> |                      |               |
| OTHER           |                                             |                      |               |
| DISPERSANTS     |                                             |                      |               |
| OTHER           |                                             |                      |               |
|                 | SITE                                        | STRATEGY             |               |

REMARKS:STATUSWILDLIFE IMPACTS

| SPECIES | CAPTURED | CLEANED | RELEASED | DEAD | LOCATION RECOVERED |
|---------|----------|---------|----------|------|--------------------|
|         |          |         |          |      |                    |

TOTALS

PREPARED BY:

APPROVED BY:

## **TAB D COST DOCUMENTATION AND RECOVERY**

### **GOALS TO BE ACCOMPLISHED:**

Open the Oil Spill Liability Trust Fund, if necessary  
Open the State Fund, if necessary  
Authorize private and government entities to conduct  
cleanup and removal operations  
Document cleanup and removal costs according to applicable  
procedures

### **UNIFIED COMMAND:**

- \_\_\_ Approve access to the Oil Spill Liability Trust Fund (OSLTF) and set response ceilings. (FOSC)
- \_\_\_ Exercise concomitant responsibility for effective ceiling management while incident is ongoing. (FOSC)
- \_\_\_ Decide if other agencies may assist in cleanup and removal effort(s) (federal, state, local or Indian tribe) and authorize the agency or agencies to perform the cleanup/removal operations.
- \_\_\_ Decide on private contractor(s) to employ for cleanup/removal operations, if any.
- \_\_\_ Approve access to the State Fund, if necessary. (State IC)
- \_\_\_ If accessed, ensure State Funds are managed in accordance with applicable procedures. (State IC)

### **FINANCE SECTION CHIEF:**

- \_\_\_ Coordinate and ensure response cost accounting documentation is conducted in accordance with the National Pollution Funds Center Technical Operating Procedures (TOPs) (NPFCINST 16451.2) for removal activities that require reimbursement from the OSLTF.
- \_\_\_ Coordinate and ensure that other reimbursable removal activities are conducted in accordance with state and or local procedures, if necessary.
- \_\_\_ Serve as the primary contact to the National Pollution Funds Center and the NPFC Case Officer to coordinate response cost recovery actions.

### **CONTRACT BRANCH:**

- \_\_\_ Issue a verbal Authorization To Proceed (ATP) for Basic Ordering Agreement (BOA) Contractor(s) and identify a specific ceiling for each contractor. Follow-up with a written delivery order (OF-347).
- \_\_\_ Contact the Contracting Officer (MLCPAC(f) at 510-437-5915 or after hours through PACAREA OPCEN (510-437-3700)) to inform him/her that a verbal ATP was issued. Forward the written delivery order to the Contracting Officer.
- \_\_\_ If no BOA Contractor is available, call the Contracting Officer to request issuance of a services contract. (If unable to reach the Contracting Officer, issue ATP (FOSC limit is \$25,000) and inform the Contracting Officer at the earliest opportunity).
- \_\_\_ If State Fund is accessed, follow applicable state contracting procedures to obtain cleanup contractor services.

### **COST BRANCH:**

- \_\_\_ If FOSC approves access to the OSLTF, obtain a Federal Project Number and corresponding ceiling authorization from CCGD11 Marine Safety Division (phone: 310-980-4300 ext 280) or after normal business hours, CCGD11 OPCEN (phone: 310-980-4400). The following information must be provided when requesting a FPN:
  1. Name of all known vessels and/or facilities involved
  2. Substance spilled and estimated amount, if known.
  3. The source of the discharge or threat of discharge.
  4. The responsible party, if known.
  5. The location and date of the discharge.
  6. The body of water impacted or threatened.
  7. The initial ceiling requested under this FPN.
  8. The planned obligations under this FPN (for example, EPA/ERT costs).
  9. The name of the cleanup contractor(s) selected, if any.
- \_\_\_ Follow-up verbal request with message traffic. (Figure J-II-D-1)
- \_\_\_ Request increase(s) in ceiling, if necessary. (Figure J-II-D-2)
- \_\_\_ Ensure the following information is included in each POLREP released:
  1. The approved project ceiling.
  2. Estimated cumulative obligations to date
- \_\_\_ Determine complexity level of the case. Ensure NPFCINST 16451(series) operating procedures are carried out for the appropriate level.
  - \_\_\_ Level I - Routine: Removal costs not to exceed \$50,000; removal activities to be completed within 1-2 weeks.
  - \_\_\_ Level II - Moderately Complex: Removal costs are between \$50,000 and \$200,000; removal activities take place in several locations with various government agencies involved.

Level III - Significantly Complex: Removal costs are greater than \$200,000; removal activities involve several contractors and government agencies and several locations.

\_\_\_ If spill is Level II, consider calling NPFC for assistance. If Level III, call NPFC immediately for assistance at 703-235-4765/67/68.

\_\_\_ Ensure all parties involved in removal activities understand cost documentation requirements of FOSC or State IC.

\_\_\_ If Alternate Record Keeping System is proposed, ensure system is approved by the NPFC prior to implementing the alternate system.

\_\_\_ Complete Daily Resource Report (Dailies) covering unit resources involved in removal activities.

\_\_\_ Collect Daily Resource Reports or official records from other Coast Guard units.

\_\_\_ Issue "Pollution Removal Funding Authorizations" (PRFA) to other government agencies for removal activities.

\_\_\_ Review the SF-1080 and Daily Resource Reports submitted by other government agencies and certify that services were authorized and completed.

\_\_\_ Review contractor invoices and Daily Resource Reports and certify that services were authorized and completed.

\_\_\_ Resolve any discrepancies between government agencies and contractors prior to submitting documentation.

\_\_\_ Ensure all documentation submitted with frequency required by NPFCINST 16451(series)

\_\_\_ Submit Completion Report to NPFC. If case is expected to last several months, submit interim reports at 30 day intervals.

{MAY BE DELETED IF THEY DO NOT APPLY.}  
(INFO ONLY. BRACKET AND INFO MUST BE DELETED)  
[MUST BE FILLED IN]  
# NUMBERS MUST BE ENTERED OR N/A  
IF YOU DELETE A LINE RECHECK YOUR PARAGRAPH ORDER.

P #####Z 92  
FM COGARD MSO SAN FRANCISCO BAY CA  
TO CCGDELEVEN LONG BEACH CA//OPC/M//  
COMCOGARD NPFC WASHINGTON DC  
COGARD FINCEN CHESAPEAKE VA  
COMCOGARD MLC PAC ALAMEDA CA//FCP//  
INFO COMDT COGARD WASHINGTON DC//G-MEP//  
{COGARD NSFCC ELIZABETH CITY NC (IF THEY ASSIST)}  
{COGARD NSF PACAREA SAN FRANCISCO CA (IF THEY ASSIST)}  
ACCT CG-W2GKRC  
BT  
UNCLAS //N16465//  
SUBJ: OIL SPILL LIABILITY TRUST FUND; REQUEST TO OPEN  
1. THE FOSC DETERMINED FEDERAL RESPONSE ACTION IS REQUIRED  
FOR A {POTENTIAL} OIL DISCHARGE AT [LOCATION]. [DESCRIPTION OF  
POTENTIAL POLLUTION INCIDENT]. { THE FOSC HAS DETERMINED THERE  
IS A SUBSTANTIAL THREAT TO THE WATERS OF THE UNITED STATES.}  
THE FOLLOWING INFORMATION APPLIES:  
A. SOURCE OF {POTENTIAL} DISCHARGE; [NAME OF VESSEL/FACILITY]  
B. TYPE OF OIL AND ESTIMATED AMOUNT; [OIL TYPE/GALLONS]  
C. [BOA/NON-BOA] CONTRACTOR SELECTED; [CONTRACTOR NAME]  
D. INITIAL FUND CEILING REQUESTED; \$ ##K  
E. PIN; UCN-###-92/MC92#####  
F. (IF NON-BOA CONTRACTOR IS SELECTED, GIVE A BRIEF EXPLANATION  
WHY. FOR EXAMPLE: NON-BOA CONTRACTOR SELECTED BECAUSE RESPONSE  
TIME REQUIREMENTS COULD NOT BE MET BY BOA CONTRACTOR.)  
2. REQUEST CONTINGENCY FUND NUMBER; 112###. (RCVD FROM D11/OPCEN)  
BT

{MAY BE DELETED IF THEY DO NOT APPLY.}  
(INFO ONLY. BRACKET AND INFO MUST BE DELETED)  
[MUST BE FILLED IN] IF YOU DELETE A LINE RECHECK YOUR PARAGRAPH  
ORDER.  
# NUMBERS MUST BE ENTERED OR N/A  
IF YOU DELETE A LINE RECHECK YOUR PARAGRAPH ORDER.

P #####Z 92  
FM COGARD MSO SAN FRANCISCO BAY CA  
TO CCGDELEVEN LONG BEACH CA//OPC/M//  
INFO COMCOGARD NPFC WASHINGTON DC  
COMDT COGARD WASHINGTON DC//G-MEP//  
COGARD FINCEN CHESAPEAKE VA  
COGARD MLC PAC ALAMEDA CA//FCP//  
{COGARD NSFCC ELIZABETH CITY NC (IF THEY ASSIST)}  
{COGARD NSF PACAREA SAN FRANCISCO CA (IF THEY ASSIST)}  
ACCT CG-W2GKRC  
BT  
UNCLAS //N16465//  
SUBJ: OIL SPILL LIABILITY TRUST FUND; REQUEST TO INCREASE  
FPN-112###  
A. MY [DTG OF FUND REQ. MSG].  
B. CCGDELEVEN LONG BEACH CA [DTG OF FUND AUTH. MSG].  
{C. MY [DTG OF ANY EARLIER FUND INCR. REQ MSGS]}  
{D. CCGDELEVEN LONG BEACH CA [DTG OF ANY EARLIER FUND INCR. AUTH.  
MSG]}  
1. THE FOSC AS DETERMINED THAT THE COSTS OF CLEAN UP ACTIONS FOR  
THE OIL DISCHARGE AT [LOCATION] WILL EXCEED THE INITIAL CEILING  
PER REF. A., B., {C., AND D.}  
2. THE FOLLOWING INFORMATION APPLIES:  
A. SOURCE OF {POTENTIAL} DISCHARGE; [NAME OF VESSEL/FACILITY].  
B. TYPE OF OIL AND ESTIMATED AMOUNT; [OIL TYPE/GALLONS].  
C. INITIAL FUND CEILING REQUESTED; \$ ##K.  
D. ADDITIONAL FUNDS REQUESTED; \$ ##K.  
E. NEW FUND CEILING; \$ ##K.  
E. PIN; FPN-112### / MC92##### / UCN-###-92.  
F. (GIVE A BRIEF EXPLANATION WHY. EXAMPLE: CONTRACTORS EQUIPMENT  
AND PERSONNEL COSTS FOR RESPONSE WILL EXCEED INITIAL ESTIMATE.)  
BT

## **TAB E REMOVAL AND DISPOSAL**

### **GOALS TO BE ACCOMPLISHED:**

Take proactive steps to minimize waste production  
Ensure that recovered products are recycled, if possible  
Approve temporary storage sites  
Ensure that all waste products are transported and disposed of properly

### **UNIFIED COMMAND:**

- \_\_\_\_\_ FOSC, State IC determine conditions under which decanting will be authorized, including locations, duration, and maximum hydrocarbon level of the discharge. If Marine Sanctuary is involved, the NOAA Administrator of the Marine Sanctuary will approve decanting.
- \_\_\_\_\_ Review and approve proposed disposal plan.
- \_\_\_\_\_ Ensure that waste generation is minimized, recycling is maximized and that all waste generated is disposed of properly.

### **DISPOSAL UNIT:**

- \_\_\_\_\_ Immediately identify sites to be pre-cleaned for minimizing waste generation. Develop pre-cleanup plan and identify personnel to conduct pre-cleanup operations.
- \_\_\_\_\_ Monitor pre-cleanup operations on-site.
- \_\_\_\_\_ Recommend to the Incident Commanders (and NOAA Administrator of the Marine Sanctuary, if applicable) of the conditions, if any, under which decanting should be allowed so that skimming operations are as efficient as possible.
- \_\_\_\_\_ RP, OSPR and California Environmental Protection Agency, Department of Toxic Substance Control (DTSC), representatives develop a detailed disposal plan for each forward command post or skimming site, as needed. Include, as a minimum, identification of temporary storage sites, State certified testing lab(s) to be used, waste/product transportation logistics, any on-site treatment, recycling procedures and disposal sites.
- \_\_\_\_\_ Submit disposal plan to Unified Command for review and approval.
- \_\_\_\_\_ Coordinate with the Safety Officer to ensure use of disposable protective equipment is balanced against the waste generation consideration/problem.
- \_\_\_\_\_ Coordinate with the Recovery and Protection Branch to ensure use of disposable sorbents is balanced against the waste generation consideration/problem.
- \_\_\_\_\_ DTSC representative to evaluate and approve temporary storage site(s).
- \_\_\_\_\_ Contact the Regional Water Quality Board for concurrence of the temporary storage sites.
- \_\_\_\_\_ Ensure that local government emergency response agencies concur with temporary storage sites and obtain any applicable permits.
- \_\_\_\_\_ Ensure all waste is tested at a State certified lab, as required, prior to transportation for recycling or disposal.
- \_\_\_\_\_ Ensure that all material determined to be hazardous is properly manifested and transported to a Class I waste management facility.
- \_\_\_\_\_ Ensure that material determined to be non-hazardous is identified on a bill of lading and transported to a Class II waste management facility identified by the local health department(s) and the RWQCB.
- \_\_\_\_\_ DTSC representative to determine if cleanup materials can/should be treated by a Transportable Treatment Unit (separation or decanting of water or incineration) at the temporary storage site.
- \_\_\_\_\_ If cleanup materials are treated at the temporary storage site, ensure that the applicable permits are obtained from the Regional Water Quality Control Board or the local Air Quality Control agency.
- \_\_\_\_\_ OSPR representative to handle all oiled wildlife and carcasses.

## **TAB F DEMOBILIZATION AND SECURE OPERATIONS**

### **GOALS TO BE ACCOMPLISHED:**

Develop and Implement Demobilization Plan  
Conduct Final Survey  
Finalize FOSC Report/Capture Lessons Learned  
Secure Operations

### **UNIFIED COMMAND:**

- \_\_\_\_\_ Review and approve proposal for securing operations: define criteria to be met before site is considered “clean” for the purposes of the cleanup operations.
- \_\_\_\_\_ Review and approve demobilization plan.
- \_\_\_\_\_ Develop recommendations for improving future cleanup operations.
- \_\_\_\_\_ FOSC review and submit final report to the Regional Response Team.
- \_\_\_\_\_ Give the order to secure operations.

### **INFORMATION MANAGEMENT STAFF:**

- \_\_\_\_\_ Prepare final incident report and submit to FOSC for approval.

### **PLANNING SECTION:**

- \_\_\_\_\_ Develop, distribute, and implement a demobilization plan, including recommendations for release of resources. Ensure resources demobilizations schedule meets all operational needs and that equipment is not released too early in the cleanup process.
- \_\_\_\_\_ Develop specific criteria for under which operations will be secured (define “clean”) and forward to the UC for review/approval.
- \_\_\_\_\_ Coordinate Natural Resource Trustees and ensure all damage assessment studies are completed or substantially underway. Prepare and submit final report to UC.
- \_\_\_\_\_ When ordered, secure operations and forward all necessary documentation to the Information Management Staff, including a list of lessons learned.

### **LOGISTICS SECTION:**

- \_\_\_\_\_ Implement natural resource restoration.
- \_\_\_\_\_ Establish demobilization facilities and coordinate all logistics for equipment removal.
- \_\_\_\_\_ Provide logistics for decontamination of cleanup equipment and vessels.
- \_\_\_\_\_ Coordinate the delivery of crane barges and other demobilization equipment.
- \_\_\_\_\_ Account for all equipment (vehicles, comms gear, etc.).
- \_\_\_\_\_ When ordered, secure operations and forward all necessary documentation to the Information Management Staff, including a list of lessons learned.

### **OPERATIONS SECTION:**

- \_\_\_\_\_ Identify decontamination resource and logistics needs for all equipment and accomplish necessary decontamination.
- \_\_\_\_\_ Establish vessel cleaning stations and monitor decontamination operations.
- \_\_\_\_\_ Secure safety zones, security zones, and vessel traffic management systems implemented for the spill.
- \_\_\_\_\_ When ordered, secure operations and forward all necessary documentation to the Information Management Staff, including a list of lessons learned.

### **FINANCE SECTION:**

- \_\_\_\_\_ Ensure all cost documentation is finalized and completed in accordance with NPFCINST 16451(series). Submit Completion Report to the NPFC.
- \_\_\_\_\_ When ordered, secure operations and forward all documentation to the Information Management Staff, including a list of lessons learned.



**TAB G CLAIMS PROCESSING PROCEDURES**

To be developed

**TAB H PUBLIC INFORMATION**

Contained in Annex (L), Public Affairs.

## **TAB I AIR OPERATIONS**

### **ORGANIZATION**

In the event of a large oil spill, the Federal On Scene Coordinator (FOSC) should immediately assess the need for aviation assistance/support and designate an Air Operations Scheduling Coordinator within the Air Operations Branch of the Unified Command. A representative from CGAS Humboldt Bay should be requested to report to the FOSC immediately following an incident/event to serve this role. When operations require and based on the needs of the FOSC, the Air Operations Coordinator should have the authority to prioritize access to the affected area. The Coordinator should also be the central point of contact to ensure that the air operations needs for relief activities, VIP concerns, media, and for over flight and mapping are met.

### **ACTION**

The Air Operations Scheduling Coordinator shall be responsible for arranging airspace control for the incident area. A controlling facility should be chosen to provide the best service to the relief activities.

### **NEAR SHORE**

For relief areas that are small and located close to the mainland shore, the nearest Air Traffic Control (ATC) agency will disseminate a Notice To Airmen (NOTAM) and manage a Temporary Flight Restriction (TFR) until an appropriate Federal On Scene Coordinator can assume control of the air space. Media response can be expected to be extensive when disaster areas are near shore and therefore, the need to establish control of the TFR is urgent.

### **OFF-SHORE**

For large or open water relief areas, the nearest Air Traffic Control (ATC) agency will disseminate the NOTAM. The Federal On Scene Coordinator/Air Operations Scheduling Coordinator must assume control of the airspace as soon as possible. Media response can be expected to be limited when disaster areas are distant from shore and therefore, the need to establish control of the TFR is not as urgent as it is when near major cities. Consideration should be given to using a USCG WHEC or appropriate USN vessel for the Federal On Scene Coordinator. This will provide air search coverage and positive control of the air space.

### **NOTICE TO AIRMEN (NOTAM)**

To implement air traffic control during a response, a FDC NOTAM (Notice to Airmen) for a temporary flight restriction may be obtained by calling the Oakland ARTCC (Air Route Traffic Control Center) Area Manager at telephone (707) 449-6200. Oakland ARTCC is responsible for issuing a NOTAM, as noted above. In Humboldt County the Arcata Flight Service Station (FSS), telephone (707) 839-1545, would be responsible for/capable of managing the area and disseminating the NOTAM. Federal Aviation Regulations, Part 91 General Operating and Flight Rules, Subsection 91.137 (FAR 91.137) applies. It offers several options as to the extent of the restrictions. A NOTAM contains clear and concise information concerning the establishment, condition, or change in any aeronautical facilities, services, procedures, or hazards. Timely knowledge of this information is essential to personnel concerned with flight operations.

### **SITUATIONS REQUIRING A NOTAM**

A NOTAM will be issued designating an area within which temporary flight restrictions apply and specifying

the hazard or condition requiring their imposition, whenever it is necessary in order to:

- (1) Protect persons and property on the surface or in the air from a hazard associated with an incident on the surface;
- (2) Provide a safe environment for the operation of disaster relief aircraft; or
- (3) Prevent an unsafe congestion of sight-seeing and other aircraft above an incident or event which may generate a high degree of public interest.

Different aircraft operating restrictions apply depending on the paragraph upon which the NOTAM is based. IFR or VFR Flight plans must be filed and notification made with a Flight Service Station (FSS) or ATC facility. The Notice to Airmen will specify the hazard or condition that requires the imposition of temporary flight restriction.

When a NOTAM has been issued under paragraph (1) of this section, no person may operate an aircraft within the designated area unless that aircraft is participating in the hazard relief activities and is being operated under the direction of the official in charge of on scene emergency response activities.

When a NOTAM has been issued under paragraph (2) of this section no person may operate an aircraft within the designated area unless one of the following conditions are met:

- The aircraft is participating in hazard relief activities and is being operated under the direction of the official in charge of on scene emergency response activities.
- The aircraft is carrying law enforcement officials.
- The aircraft is operating under the ATC approved IFR flight plan.
- The operation is conducted to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather, or terrain; notification is given to the Flight Service Station (FSS) or ATC facility specified in the NOTAM to receive advisories concerning disaster relief aircraft operations; and the operation does not hamper or endanger relief activities and is not conducted for the purpose of observing the disaster.
- The aircraft is carrying properly accredited news representatives, and, prior to entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the Notice To Airmen and the operation is conducted above the altitude used by the disaster relief aircraft, unless otherwise authorized by the official in charge of on scene emergency response activities.

When a NOTAM has been issued under paragraph (3) of this section, no person may operate an aircraft within the designated area unless at least one of the following conditions are met:

- The operation is conducted directly to or from an airport within the area, or is necessitated by the impracticability of VFR flight above or around the area due to weather or terrain and the operation is not conducted for the purpose of observing the incident or event.
- The aircraft is operating under an approved ATC IFR flight plan.

- The aircraft is carrying incident or event personnel, or law enforcement officials.
- The aircraft is carrying properly accredited news representatives and, prior to entering the area, a flight plan is filed with the appropriate FAA or ATC facility specified in the NOTAM.

The following guidelines will be followed when requesting that a TFR be placed into effect:

Points of contact to activate the TFR (listed according to the Federal Aviation Regulation (FAR) reference:

- FAR 91.137(a)(1) & FAR 91.137(a)(2) contact Area Manager In Charge (AMIC) at (707) 449-6200
- FAR 91.137(a)(3) contact FAA Regional Office at (415) 876-2775

The following information shall be provided by the requesting agency/office:

- Name and organization of person recommending or requesting TFR's.
- Brief description of the situation.
- Estimated duration of the restriction.
- Name of the agency responsible for on scene emergency activities and telephone or other communication contact.
- A description of the affected area by reference to prominent geographical features depicted on aeronautical charts if possible, otherwise, by geographical coordinates and VOR/DME fix when the latter is available.
- Description of material or activity posing a hazard to persons and property in the air.
- Description of hazard that would be magnified, spread, or compounded by low flying aircraft or rotor wash.
- Nature of airborne relief, proposed aircraft operations, and locations of relief aircraft base.
- Contact point or radio frequency for handling news media requests to operate at altitudes used by relief aircraft.

### COORDINATING V.I.P. AND MEDIA OVERFLIGHTS

The aircraft carrying properly accredited news representatives (or V.I.P.s) prior to entering that area must get approval from the Federal On Scene Coordinator, (FOSC) and file a flight plan with the appropriate FSS or ATC facility specified in the NOTAM. Generally, the operation is to be conducted above the altitude used by the disaster relief aircraft, unless otherwise authorized by the Federal On Scene Coordinator.

### OVERFLIGHT AND MAPPING CAPABILITIES

The function of overflights/mapping of a Marine Environmental spill is to determine the limits of a spill and the direction of its movement.

For large area or open water spills, use of the Coast Guards HU25B Aireye aircraft to map a spill would be

essential. It is maintained at CGAS Cape Cod in B-18 response status. CGAS Cape Cod policy is to send an Aireye Pilot to the scene of an incident to assist the Scheduling Coordinator/FOSC in making the best use of the aircraft. He would help coordinate all AIREYE aircrew/aircraft logistic support. The effectiveness of AIREYE in inland waters such as the Humboldt Bay Area would be questionable.

For Small area or inland spills CG helicopters would be called upon to map the affected area as necessary.

### RESTRICTIONS

Neighboring airports near incident areas will retain their respective control zones.

Safety of flight issues such as weather, and crew rest are addressed in M.3710 (CG Air Operations Manual).

### AIR RESOURCES AND ACCESS PROCEDURES

CCGDELEVEN(opc) (310) 980-4400 coordinates all Coast Guard aircraft support within the district:

CGAS Humboldt Bay: 3 H65 helicopters; call OPCEN (707) 839-6113/6115.

CGAS SAN FRANCISCO: 3 H60 helicopters, call OPCEN (415) 876-2929.

CGAS SACRAMENTO: C-130 aircraft for transport of Strike Team support or overflight, call OPCEN (916) 643-2081.

CGAS CAPE COD HU25B AIREYE: call D11(opc) (310) 980-4400 to request AIREYE resource. D11(opc) will send canned message request for HU25B (AIREYE) resource to PACAREA, INFO LANTAREA/CCGDONE/CGAS CAPE COD/COMDT(G-MER). CGAS CAPE COD OPCEN.

NORTHERN AIR Charter Service: Eureka (707) 443-3179 or Rortuna (707) 725-6905.

LOUISIANA-PACIFIC CORPORATION Flight Department: operate Bell 206 helicopter out of Arcata Airport in McKinleyville (707) 839-0321.

CALIFORNIA DEPARTMENT OF FORESTRY Command Center: Coordinate all requests for emergency helicopter response within Humboldt County, (707) 725-2278.

DEL NORTE AIR Charter Service: Crescent City (707) 465-3804.

CALIFORNIA HIGHWAY PATROL: call (916) 445-2211.

## **TAB J PORT TRAFFIC MANAGEMENT**

- (a) 33 USC 1221
- (b) 33 USC 1225
- (c) 33 USC 1231
- (d) 33 CFR 1
- (e) 33 CFR 6
- (f) 33 CFR 160
- (g) 33 CFR 165

### **INTRODUCTION**

In the event of an oil spill one of the FOSC's concerns will be the effective, efficient, and safe routing of any marine traffic affected by the spill. Port Traffic Management (PTM) responses will vary considerably based upon the types and amounts of traffic encountered and the size and location of the spill. However, our options are relatively few, they are:

- No action required
- Short term/minor rerouting via COTP Order or Safety Zone
- Long term/significant rerouting
- Port closure

### **COTP ORDER**

For the purposes of this Annex, a COTP Order may be issued to a vessel prohibiting movement from its current position and thereby spreading pollution. A COTP Order is a directive issued to a specific entity for a specific period of time and whose parameters are clearly delineated in the order itself. It gains its authority under ref. (a) and is promulgated under ref. (f). Failure to comply with an Order of this nature subjects the violator to a \$25,000 civil penalty. Willfully and knowingly violating this Order subjects the violator to a criminal fine and imprisonment for committing a Class D felony. In addition to this, the specified vessel may be seized and held liable for any monetary assessments.

### **SAFETY ZONE**

For the purposes of this Annex, a Safety Zone may be issued to either keep vessels from entering a contaminated area, or to keep them from leaving. A Safety Zone is a directive concerning a water area, a shoreline area, or a combination thereof to which, for safety or environmental purposes, access is limited to authorized persons, vehicles, or vessels. It may be stationary and described by fixed limits or it may be described as a zone around a vessel in motion. The COTP establishes these normally temporary zones. Safety Zones get their authority from refs. (b), (c), (d), (e), and (f) and are promulgated under ref. (g). The penalties for violating a Safety Zone are identical to those of the COTP Order.

### **SCENARIOS**

The traffic impact of any size spill in any location will depend largely upon several criteria, they are:

- On scene weather
- Commodity spilled

Time of year/current conditions  
Tidal conditions  
Proximity to established routes, anchorages, facilities  
Response resources immediately available  
Traffic type and density

Principal locations with any frequency of dense traffic in this area include Crescent City, Humboldt Bay, and the Noyo River.

“Most Probable Spill”. The occurrence of a “Most Probable Spill” event in this area will have little or no effect on traffic and would therefor most likely entail no action. At most, any vessels affected in the immediate area of a spill would be inconvenienced to a minor degree.

“Maximum Most Probable Spill”. The occurrence of a “Maximum Most Probable Spill event would again create a relatively minor disturbance of traffic for a short period of time to those vessels in the immediate vicinity. It may be advisable to establish a Safety Zone temporarily to facilitate clean up efforts. Based upon tidal conditions this would be short lived, we can expect any effects to diminish within two tidal cycles. During this time, the harbor would most likely be closed to deep draft traffic/barges which would be directed to loiter in the vicinity of the sea bouy, proceed to another port, or anchor SW of the channel entrance dependent upon current circumstances.

“Worst Case Spill”. The occurrence of a “Worst Case Spill” event in this area would create a considerable disturbance to traffic, albeit for a relatively short period of time due to tidal/current action. From the onset, the Coast Guard would employ the use of a Safety Zone closing the entrance channel and ceasing the flow of other than emergency vessels within the Bay, in essence a port closure. For this, as well as any scenario other than those creating minor or negligible traffic disturbances, the CG would employ the check list items from Figure J-II-J-1 to determine, among other things, the list of criteria mentioned above. In addition to this, the CG would also employ the area-specific notification lists available in Annex J Tab A. However, in the Humboldt Bay area there are certain special requirements necessary due to the significant tidal conditions present. Specifically, should this scenario or one of greater magnitude occur, any/all of those deep draft vessels at anchor within the Bay would require the assistance of a tugboat standing by to ensure no dragging due to tidal effect occurs. As cleanup operations ensue, and oil pollution trajectory allows, vessels may be allowed to move within or depart the Bay. If this were to happen, Group Humboldt Bay floating assets with MSO or Reserve crewmembers embarked onboard would be employed to act as strategically placed inspection stations letting only those vessels that are, or have been cleaned, move within or depart the Bay. Locations for this may include the King Salmon dock area, Woodley Island Marina area, and Humboldt Bay Bouy #8.

“Spill of Maximum Impact”. The effects of a “Spill of Maximum Impact” occurring would depend largely upon its location, weather, and time of year. In an event of this magnitude, through effective notification, all vessels within the harbor will be given the opportunity, and indeed, urged to depart prior to the Bay being totally impacted by the spreading flow of pollutant. However, history has shown that the entrance channel has been closed for up to ten consecutive days due to winter storms, this possibility must be considered. If this scenario were to happen during the winter, southerly winds and currents will most certainly spread the contamination toward and into the harbor, effectively closing it in the same manner as did the “Worst Case” spill. If, on the other hand, this were to happen in the summer, northerly winds and currents would most likely spare the harbor. This may well lead to Humboldt Bay becoming the port of choice to service spill cleanup vessels thereby causing its own unique traffic density problems. These, however, would not be of such magnitude that would cause existing CG forces and local entities any difficulties.

## TRAFFIC MANAGEMENT

Figure J-II-J-1 contains an item by item list of PTM actions requiring attention for any spill in this area starting at the time of initial notification through the ensuing cleanup's completion. The list can, and should, be customized based on the criteria listed earlier, along with the location and size of the spill.

Effective notification and dissemination of information is paramount. In this area Urgent Marine Information Broadcasts would be made using Channels 13 and 77 VHF-FM initially, thereafter information may be passed on 16 VHF-FM and any other working frequencies used by local pilots, fishermen, and marinas.

The following entities would be expected to act as "information conduits" in their respective groups for their respective locales:

### Deep Draft

Westfall Stevedoring  
Bar Pilots  
UNOCAL  
Louisiana Pacific Corp.

### Fisheries

Eureka Fisheries  
Pacific Choice Seafoods  
Fisherman's Mktng Assoc.  
Harbormaster Noyo River  
Harbormaster Crescent City  
State/Local Law Enf.

### Recreational Vessels

Local Marinas  
Local Media  
Coast Guard Auxiliary  
Humboldt Bay Harbormaster  
State/Local Law Enforcement



### *Waterways Unit Actions*

- \_\_\_\_\_ Initial notification
- \_\_\_\_\_ Spill verification/rough plot of location
- \_\_\_\_\_ Verify status of VTS/cognizant Group/District (m) and PACAREA OPCEN notifications
- \_\_\_\_\_ Verify status of UMIB
- \_\_\_\_\_ Verify status of on scene WX/tidal/current conditions
- \_\_\_\_\_ Verify commodity spilled
- \_\_\_\_\_ Verify status of local traffic type/density
- \_\_\_\_\_ Verify start of notification process-Annex J Tab A (PTM specific entities)
- \_\_\_\_\_ Obtain spill trajectory based on previous information
- \_\_\_\_\_ Verify status of Safety Zone(s)(PTM specifics passed to COTP)
- \_\_\_\_\_ Request PTM required resources from cognizant Group/District
- \_\_\_\_\_ Designate floating asset to act as localized VTS with MSO rep onboard
- \_\_\_\_\_ Designate floating assets to enforce Safety Zone and/or monitor progress of pollution with respect to traffic lanes
- \_\_\_\_\_ Review/update Safety Zone as necessary

## **ANNEX J OPERATIONS**

### **APPENDIX II OPERATIONS**

#### **TAB K COMMUNICATIONS**

This annex establishes which radio frequencies will be used for inter-agency communication in an oil spill response. Most of the frequencies are within the marine band of the VHF-FM spectrum. Figure J-II-K-1 is a graphic representation of this frequency allocation. A secondary purpose is to identify the operating frequencies used by principal federal, state, and local agencies, and provide an overview of those agencies' capabilities and resources.

Implementation of this plan will be a slow process. No party involved in the response should expect communications to be established immediately. All aspects of this plan can be expected to be in place within the first two days.

#### **Unified Command Calling and Coordination Frequencies:**

VHF-FM Channel 81A (157.075Mhz) is the frequency for ground communication between the Unified Command and USCG units on-scene. It is also the secondary frequency for communication between the Unified Command and on-scene units from OSPR, U.S. Fish & Wildlife, local agencies, and Pacific Affiliates.

The primary frequency for communication between the Unified Command and OSPR, U.S. Fish & Wildlife, local agencies, and Pacific Affiliates during the initial phase of the response is CLEMAR, but is expected to shift at some point to CALCORD as additional organizations join the MAC.

#### **Unified Command/Responsible Party Calling and Coordination Frequency:**

Due to the range of different possible responsible parties, it is impossible to predesignate a frequency for this purpose which would work in all cases. Therefore, as early as possible in a response, the communications unit and RP should make contact by landline and choose a frequency accessible to both parties.

The VHF-FM frequency 150.980Mhz is used by Marine Spill Response Corporation, while UHF frequency 454(Tx)/459(Rx) is used by Clean Bay cooperative. In the absence of direct communications with the RP, federal & state authorities might use these frequencies and communication with these parties as an interim measure.

#### **U.S. Coast Guard working frequencies:**

Channel 81A (157.075Mhz): communication between U.S. Coast Guard units and other Coast Guard personnel who are part of the OSC staff.

Channel 83A (157.175Mhz): the primary working frequency between the Unified Command and aircraft of both U.S. Coast Guard and California Dept. of Fish & Game.

Channel 23A: primary working/SAR frequency of Group Humboldt Bay.

Channel 16 - (156.8Mhz) Designated under international convention for use for ship-to-ship and ship-to-shore hailing and distress in international waters. ALL users are required to use channel 16 for only these purposes

and then switch to other channels for subsequent communications. Oil spill response is no exception.

Channel 13 - (156.65Mhz) Designated bridge-to-bridge hailing and navigation safety frequency in inland and offshore waters. It may be used only to establish contact and make arrangements between vessels in crossing, meeting, or overtaking situations in accordance with the International or Inland Navigation Rules.

Safety Frequency: Ch. 06 (156.3Mhz) is designated as the frequency which may be used by all parties for communication on matters involving human health and safety. FCC regulations require all vessels equipped with VHF-FM capability to have this channel. As there is expected to be little other traffic on this channel during an oil spill response, this should be monitored by all involved units that have this channel available, and regarded as a tertiary channel for the response.

CA Office of Oil Spill Prevention and Response (OSPR) working frequency: In central and northern California, OSPR wardens' and biologists' working frequencies are 159.435Mhz(Tx) and 151.415Mhz (Rx). However, OSPR wardens have handheld radios with VHF channel 83A, and this may be the best way to establish and maintain contact between them and CG first responders during the initial stages of a spill response.

County OES and local government agency operating frequencies: County OES's and local government agencies such as police, fire, county sheriffs, and environmental health departments have frequencies and communications systems established within their counties. It is not the intent of this plan to interfere with or change those established systems. The primary frequency during the initial response is CLEMAR, but is expected to shift at some point to CALCORD as additional organizations join the MAC. Either frequency will be used for coordination among those agencies and between those agencies and the Unified Command.

Intra-agency and Intra-company communications: It is expected that each government agency and private company involved in the response operation will continue to use its own normal working frequency(s) for internal communication.

Alternate oil spill containment and cleanup frequencies: 47 CFR Part 90.65 designates the four primary VHF-FM frequencies and two primary UHF-FM frequencies listed below for use in oil spill containment and cleanup operations.

- (1) 150.980Mhz VHF-FM\*
- (2) 154.585Mhz VHF-FM
- (3) 158.445Mhz VHF-FM
- (4) 159.480Mhz VHF-FM
- (5) 454.000Mhz UHF\*
- (6) 459.000Mhz UHF\*

\*as noted in Figure J-II-K-1, these are the primary operating frequencies used by Marine Spill Response Corporation and Clean Bay coop, respectively.

#### Coast Guard Communications Capabilities:

The MSO has a Contingency Communications Kit in reserve for an oil spill response. The kit consists of a portable VHF repeater system, 2 portable VHF base stations and a cache of VHF handheld radios. The equipment in the kit will provide adequate communication capabilities for initial responders. All VHF radios are tuned to the frequencies within the marine band.

The Coast Guard has a system of high sites along the coast designed to provide VHF-FM and HF coverage of the entire coast. Coast Guard Groups Monterey, San Francisco, and Humboldt Bay all have VHF phone patch capability; therefore the MSO Command Duty Officer (CDO) should be able to communicate with any vessel within range of one of the repeaters. The locations of these repeaters are listed in Figure J-II-K-2. By phone patch through Communications Area Master Station Pacific (CAMSPAC), located at Pt. Reyes, the MSO watch office could communicate on HF frequencies to a vessel offshore anywhere off the coast of California.

The Coast Guard Pacific Strike Team has a cache of programmable hand-held VHF-FM radios and a computer which can tune those radios to any desired frequency. The Strike Team also owns several portable repeaters which can be tuned to a desired frequency and deployed wherever necessary. It also has one portable INMARSAT (satellite telephone) system.

#### Pacific Strike Team Command Trailer:

Pacific Strike Team also has a Communications/Mobile Command Post trailer equipped with VHF-FM radio and multiple line telephones.

#### Transportable Communication Centers (TCC'S):

The TCC is a self-contained, rapidly deployable Coast Guard manned and maintained Communications Module. It can provide a full range of telecommunications capabilities to support a large oil spill response. Its capabilities include:

- transmissions possible in all modes of communication in HF, VHF and UHF;
- different types of antennas for best propagation and coverage in remote and uneven terrain;
- cellular telephone (secure, non-secure, and computer/data link);
- INMARSAT (satellite telephone system); and
- Weather fax direct from National Weather Service.

One TCC is located at the Coast Guard Communications Area Master Station Pacific (CAMSPAC) at Pt. Reyes, CA in a twelve hour (B-12) recall status. It can be towed by five-ton truck or airlifted in a C-130 fixed-wing aircraft. A modified van accompanies the unit if deployed by aircraft, but the van is not well suited for towing the TCC long distances. If the unit had to be deployed far from the destination airport, a five-ton truck would be required. A team of three persons (CG Electronic Technicians and Telecommunication Specialists) accompanies the unit for maintaining the operational status, the requesting unit is to provide personnel to man the TCC. The TCC can be powered by generators (which accompany the unit) or directly connected to a power source. Fuel for the generators will be supplied by the requesting unit. The power requirements for the TCC are:

Five wire, three phase power  
120/208-220/380 VAC  
up to 65 HZ, 42 AMPS

Adequate space is required for the set up of the TCC, approximately 200 feet by 200 feet. The antenna setup

requires this space due to the power radiating from each of the transmit antennas. This is an important consideration in the decision where to locate the unit. After arrival, it will take approximately 2 hours to get the TCC on line.

The TCC is a Pacific Area controlled asset. If it is determined that the TCC is necessary for a response, requests must be made through PACAREA(dttm).

#### OSPR Communications capabilities:

OSPR also has a system of repeaters and high sites throughout the state. At present coastal coverage is approximately 80%. However, two portable repeaters are also available to provide coverage in remote areas and provide for a local net at a spill site. OSPR vehicles and personnel throughout the state have VHF-FM radios (150-174Mhz), and OSPR has a cache of 34 handheld “pool” radios for use by other agencies or groups assisting in spill response. The OSPR Communications Manager is Mr. Brian Groves (916-324-7994).

#### Local Government Communications

CALCORD (VHF-FM 156.075Mhz) is the primary frequency for coordination among state and local government agencies in a multi-agency response.

Local fire and emergency medical services agencies also use frequencies within the FIREScope system.

Local law enforcement agencies, county sheriffs, and the California Highway Patrol use the CLEMAR system for inter-jurisdictional coordination.

#### Mobile Communications Staging Areas

The selected shoreside staging area for multiagency operations will be directed via land line, or on CH81A VHF-FM Coordination NET. Once a communications site has been selected, mobile communications vehicles and trailers should be located no closer than 25 feet to each other. The need for alternate or multiple staging areas and attendant communications coverage will depend on the extent of the coastal area affected by the spill.

#### Communications Status Charts

In order for all response agencies to effectively organize communications efforts, information on communications status must be shared by all agencies at the staging area. Once mobile communications trailers are in place, and agencies have checked into CH81A, a communications status chart listing each agencies’ guard requirements should be prepared and updated as situations dictate. All agencies should fill in the appropriate information on a chart similar to the Communications Status Chart (Figure J-II-K-3). The communications status chart should also be reproduced in paper form and distributed to all other response agencies located at the staging area. Additional updates or changes in unit status may be relayed via CH81A once communication status charts have been distributed.

#### Security Awareness

Radio communications, unless encrypted for secure transmission, are subject to electronic surveillance and monitoring by private citizens and the public media. All agencies should be security conscious before transmitting information by radio that may be considered media sensitive, proprietary, or private. Good judgement is the only rule that applies; however, public affairs representatives should be consulted for guidance

in specific instances if necessary.

**REPEATERS:**

**COAST GUARD VHF-FM HIGH SITES:**

| <u>HIGH SITE</u>     | <u>LOCATION</u> | <u>CONTROL</u>   | <u>ELEV</u> |
|----------------------|-----------------|------------------|-------------|
| (A) Point St. George | 41-45N 124-15W  | Gru Humboldt Bay | 200Ft       |
| (B) Trinidad Head    | 39-41N 124-10W  | Gru Humboldt Bay | 300Ft       |
| (C) Cahto Peak       | 39-41N 123-35W  | Gru Humboldt Bay | 4200Ft      |
| (D) Pt. Cabrillo     | 39-25N 123-45W  | Sta Noyo River   | 50Ft        |
| (E) Mt. Jenner       | 38-29N 123-11W  | Sta Bodega Bay   | 1330Ft      |
| (F) Mt. Umunhum      | 37-09N 121-54W  | Gru Monterey     | 3380Ft      |
| (G) Pt. Sur Light    | 36-18N 121-54W  | Gru Monterey     | 200Ft       |
| (H) Cambria          | 35-32N 121-15W  | Gru Monterey     | 500Ft       |
| (I) Tranquillion Mt. | 34-35N 120-33W  | Sta Channel Isl  | 2170Ft      |

**HF HIGH SITES:**

|                |                |                   |       |
|----------------|----------------|-------------------|-------|
| (J) Arcata     | 52-00N 124-05W | Gru Humboldt Bay  | N/A   |
| (K) Pt. Arena  | 38-57N 124-44W | Gru Humboldt Bay  | N/A   |
| (L) Pt. Bonita | 37-48N 122-32W | Gru San Francisco | N/A   |
| (M) Pt. Pinos  | 36-38N 121-56W | Gru Monterey      | N/A   |
| (N) Cambria    | 35-32N 121-15W | Gru Monterey      | 500Ft |

**COMMUNICATIONS STATUS CHART**

**AGENCY:**\_\_\_\_\_

**COMMAND POST:**\_\_\_\_\_ **FREQUENCY GUARD:**\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

| <u>FIELD UNIT</u> | <u>CALL SIGN</u> | <u>STATUS</u> | <u>FREQUENCY</u> |
|-------------------|------------------|---------------|------------------|
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |
| _____             | _____            | _____         | _____            |

| <u>OTHER AGENCIES ON SCENE</u> | <u>FREQUENCY</u> | <u>CELLULAR</u> |
|--------------------------------|------------------|-----------------|
| _____                          | _____            | _____           |
| _____                          | _____            | _____           |
| _____                          | _____            | _____           |
| _____                          | _____            | _____           |

MISCELLANEOUS

\_\_\_\_\_

## **TABL FIREFIGHTING**

### **Introduction:**

A vessel casualty and oil spill or potential oil spill, may require the following or a combination of the following responses:

- Search and rescue
- Oil spill containment/clean-up
- Vessel fire
- Vessel salvage

The first priority in a vessel casualty is the safety of the crew and any other personnel in the area. Search and Rescue and firefighting are typically human safety issues. These emergencies and their relationship to follow-on phases of spill clean-up and vessel salvage are described below.

The SAR (Search and Rescue) Mission Coordinator (SARMC) responds to missing or endangered vessels by deploying Coast Guard or other available rescue resources. This individual will be the local Coast Guard Group Commander or District Commander in whose zone the vessel casualty occurs. The On-Scene Commander will typically be one of the units responding. Until the safety of the vessel's crew is ensured, the control of the incident will not shift to the Captain of the Port as the Federal On-Scene Commander for Oil Spills or for a Vessel Fire.

In the event of a Vessel Fire or a Fire at a Marine Facility, the Marine Firefighting Contingency Plan, (MFCP), will be implemented. This plan can be used in conjunction with this Oil Spill Contingency Plan to enhance operations. Similar to this Tab on Firefighting, Tab (M) of this ANNEX follows along describing the relationship of salvage to Oil Spill response.

The relationship of Firefighting to Oil Spill Response can best be understood by examining the following situations which could potentially require both responses:

- **A fire or explosion occurs resulting in spilled oil.**
- **Oil is spilled resulting in fire/explosion or the potential for fire and explosion.**

If both firefighting and oil spill responses are necessary, the fire is the primary response priority. This prioritization can be the result of crew or human safety issues or the desire to avoid additional spilling. In the event of a vessel or facility fire, the Marine Safety Office San Francisco Bay **Marine Firefighting Contingency Plan** (MFCP) dated 2 October 1992 will be activated. This plan defines policy and assigns responsibilities for response actions in the event of a marine fire. **Annex X of the MFCP contains detailed firefighting response checklists to be used by the Firefighting Unit within the Operations Branch of the Unified Command.**

The issue of allowing the ship, facility, or cargo to continue to burn should be addressed via the procedures set forth in ANNEX G, Appendix III, In-Situ burning.

Containment and collection of spilled oil will proceed based on the safety of the situation and on the ability of personnel and equipment to access the spill. Similarly, once the fire is extinguished, salvage efforts may also proceed. Salvage is addressed in Tab (M) of this Annex. The following highlight information is extracted from



the MFCP.

### Policy and Responsibilities:

#### Federal:

The Coast Guard exercises primary federal responsibility for the safety and security of the ports and waterways of the United States. Because the Coast Guard has limited resources to respond to waterfront or marine fires, emphasis is placed on prevention through the Port Safety Program. Local port operators, municipalities, and public safety agencies are expected to provide and maintain adequate disaster response capabilities in their ports.

The Coast Guard will assist local fire fighting units when requested in accordance with the MFCP. In emergencies, the Captain of the Port may control the movement of ships and boats, establish safety zones, and provide on-scene forces (see Annex(J), TAB(J)) of this plan. Responsibilities of the COTP in a major fire aboard a vessel or waterfront facility include:

- Assume operational control of all Coast Guard forces on-scene.
- Establish safety zones, as necessary.
- Obtain tugs to assist in relocating moored or anchored vessels.
- Alert owners/operators of terminal(s) or vessel(s) at risk.
- Respond to oil or hazardous materials discharges in accordance with this plan and the current MSO HAZMAT Plan.
- Assume IC for the burning vessel underway or at anchor when:
  - (a) the fire department with jurisdiction is unable to respond, or
  - (b) no fire department has jurisdiction.
- Provide information on involved waterfront facilities.
- Provide information on the location of hazardous materials on the vessel or at the facility, if available.
- Provide technical data on ship's construction, stability, and marine firefighting equipment.

#### State:

The California State Office of Emergency Services (OES) Fire and Rescue Plan, under the authority of the California Master Mutual Aid Agreement is the legal basis for mutual aid within the State. Mutual aid requests must be originated through appropriate channels in accordance with the plan. OES resources can be requested through the established mutual aid procedures.

#### Local:

Local fire departments are responsible for fire protection within their jurisdictions. In a number of cities, this responsibility includes marine terminals and facilities. Some terminals and facilities have in-house fire departments. In most cases, the terminal fire departments have entered into mutual aid agreements with the surrounding local fire departments. Typical responsibilities of local fire departments include:

- Assume position of Incident Commander (IC) for firefighting operations.

- Request necessary personnel and equipment, including fire boats, and appropriate medical aid.
- Determine the need for and request mutual aid.
- Make all requests for Coast Guard/federal personnel, equipment and waterside security through the COTP.
- Establish liaison with police department for land-side traffic and crowd control, site security, and evacuation.
- Provide portable communication equipment to response personnel from outside agencies.

#### Master of the Vessel:

The Master is always in charge of the vessel, but NEVER in charge of the fire fighting efforts of non-vessel personnel.

#### Owners/Operators of Vessels/Waterfront Facilities:

These individuals are always a critical source of vessel/facility information. Regardless of other response resources, the owners/operators of vessels and facilities retain a fundamental responsibility for safety and security.

#### Important Factors to be Considered in Responding to a Vessel Fire:

##### **Fixed shipboard fire protection systems will seldom be of value to agencies responding to a vessel fire.**

These systems are designed for the vessel's self protection and will have already proven to be inadequate for the incident to which you are responding. They are limited in capacity whether it is the rating of the fire pump, the pressure rating of the water mains, or the capacity of the foam concentrate/carbon dioxide storage tanks. Supplementing these systems is usually very difficult due their location aboard ship and the fact that the equipment is usually incompatible with that of local response agencies.

**Final extinguishment of shipboard fires is seldom possible without firefighters boarding the vessel to complete the task.** The Incident Action Plans(IAP) should allow for this likelihood and make provision for these potential needs (equipment, strategy/tactics expertise, firefighters (local or private)) at the outset of the incident.

Shipboard firefighting is a manpower intensive operation if a vessel is dockside. Crews are effective for shorter periods of time due to the rigors of this type of firefighting. If these same crews must approach from the water side, additional factors of rough seas, access routes not designed for personnel in firefighter's protective clothing, etc., further reduce their effectiveness and greatly increase the dangers involved.

Logistics are generally very different from most landside responses. Problems that are relatively easily solved on shore (sustained high volume water flow, augmenting of foam/C02 agent delivery, manpower utilization/relief/staging) become extremely difficult when the incident takes place while the vessel is underway or at anchorage. It is usually preferable to select a loading site which results in more land travel and less water travel enroute to the site. When considering delivery of resources to the site of a potential fire, planners should prepare for the worst possible scenario and activate enough resources to handle the maximum fire potential if prevention efforts fail.

When establishing the Safety Zone, take into consideration the fire and explosion potential. Establish a zone of sufficient size to encompass potentially affected areas if an explosion or fire occurs. Ensure no vessel

movement takes place without the permission of the COTP, especially separation of vessels involved in a collision.

### VESSEL FIRE - Checklist Highlights (Use checklist in MFCP):

Situation: Vessel on fire, away from dockside with fire extending or threatening to extend from point of origin. Crew unable to control fire.

#### Strategies:

- Apply high volume water delivery to lower heat and possibly reduce threat of fire spread while plans formulated.
- Formulate Incident Action Plan (IAP) to determine whether foam extinguishment is possible. Determine type of liquid hazard (hydrocarbon, polar solvent, etc). Determine size of liquid surface area to properly calculate application rate of foam solution. For assistance in calculation, types of foam concentrate required, equipment response time, etc, contact the Petro Chem Mutual Aid Organization Dispatch Center at (510) 242-5555.
- Make foam attack via firefighting vessels suited for the task employing appropriate tactics to reduce fires to a point where final extinguishment can be completed, if necessary, by foam handline and/or portable dry chemical extinguisher aboard the vessel as required.

#### Steps to take:

- Have ship's personnel man emergency stations if possible.
- Establish Safety Zone as required to include all areas that might become involved.
- Insure that no vessel movement takes place (including disenlodgement of vessels in a collision) without permission of COTP.
- Initiate call-up of necessary resources via resource Guide in Marine Fire Contingency Plan. Emphasis on:
  - Fireboats and Firetugs (Section 8)
  - Tugs and Barges (Section 18) In areas where dedicated firefighting vessels are unavailable, these vessels can serve as adequate firefighting attack vessels once equipped with portable equipment.
  - Portable Fire Pumps (Section 21) Vessels not equipped with water pumping capability can be converted at the time of the incident provided they have sufficient deck space and load carrying capability. As demonstrated during the M/V Jupiter fire, portable pumps can be lashed aboard a vessel of opportunity, (USCGC BRAMBLE in this instance), and supply water delivery requirements. Positioning the pump where the hard suction hose can reach the water is imperative.
  - Foam proportioning/Delivery Equipment (Section 11) The size of the fire will dictate the flow rate requirement of the delivery equipment. Foam solution delivery needs can number into the thousands of gallons perminute. These large flow requirements are usually possible only by massing the flows of multiple proportioners and master stream delivery devices.
  - Foam Bulk Suppliers (Section 10) Quantities required should include that required for each phase of the incident. The need to respond as quickly as possible will limit the theinitial volume of foam concentrate to that which is contained in the tanks (300-2500 gals of concentrate) of the fireboat/firetugs included in the initial response. Immediate activation of the MFCP will shorten the period of time necessary to replenish foam blankets provided by the first responding firefighting vessels. Within three hours 30,000 plus gallons of concentrate can be enroute to appropriate shoreside equipment loading sites. If the safing of the incident requires more, resupply will necessitate response from sources of foam concentrate as far away as Los Angeles and beyond. Obviously, if the need for these resources

is anticipated, early activation will reduce the likelihood of exhausting concentrate supplies during the operation. The M/V JUPITER incident resulted in the mobilization of resources, some of which were thousands of miles away at time of activation. Shoreside Emergency Loading Sites (Section 15). All Equipment, manpower and materials not already aboard a vessel will have to be appropriately transferred at a location that will permit the shortest response time to the scene. Therefore, it is usually preferable to select a loading site which results in more land travel but less water travel enroute to the scene.

Steps to be avoided:

- Disturbing foam blankets.
- Using the vessels, once committed to foam operations, for other duties.

**FIRE PREVENTION DURING AN OIL SPILL- Checklist Highlights**  
**(Use checklist in MFCEP):**

Situation: Vessel leaking Flammable Liquid from collision or grounding with no fire.

Strategies:

- Apply high volume water delivery to disperse vapor clouds if necessary.
- Foam application in areas of Flammable Liquid accumulations.

Steps to take:

- Have ship's personnel man emergency stations if possible.
- Establish Safety Zone as required to include all areas that might become involved if there is ignition.
- Insure that no vessel movement takes place (including dislodgement of vessels in a collision) without permission of COTP.
- Initiate call-up of necessary resources via resource Guide in Marine Fire Contingency Plan. Emphasis same as for VESSEL FIRE.

Steps to be avoided:

- Applying foam from locations downwind of the vaporizing Flammable Liquid.
- Disturbing foam blankets
- Using vessels, once committed to foam operations, for other duties.

**CONTROLLED BURNING SCENE SAFING - Checklist Highlights**  
**(Use checklist in MFCEP):**

Situation: Vessel(s) involved in fire in which premature extinguishment might cause more problems than a "controlled burn" situation. An example of this type of incident was the fire that took place in Deer Park, TX on October 7, 1986 (see NTSB MAR-87-08) in which MTBE (methyl tertiary butyl ether) leaking from barge was specifically not extinguished. It was determined that, by doing so, a potentially larger pollution/fire situation was averted.

Strategies:

- Apply high volume water delivery to reduce heat and possibly reduce threat of fire while extinguishment plans are made.
  - If foam is being considered, determine the following:
    - Type of Liquid hazard, (hydrocarbon, polar solvent, etc.)
    - Size of liquid surface area requiring foam application.
- For assistance in calculation, types of foam concentrate required,

equipment response time, etc. contact the Petro Chemical Mutual Aid Organization Dispatch Center at (510) 242-5555.

- Implement plan of sustaining required foam delivery using shuttle vessels to resupply delivery devices.

Steps to take:

- Have ship's personnel man emergency stations if possible.
- Establish Safety Zone as required to include all areas that might become involved.
- Insure that no vessel movement takes place (including disenlodgement of vessels in a collision) without permission of COTP.
- Initiate call-up of necessary resources via resource Guide in Marine Fire Contingency Plan. Emphasis same as for VESSEL FIRE.

Steps to be avoided:

- Disturbing foam blankets
- Using vessels, once committed to foam operations, for other duties.

## **TAB M SALVAGE**

### **Introduction:**

A vessel casualty and oil spill or potential oil spill, may require the following or a combination of the following responses:

- Search and rescue
- Oil spill containment/clean-up
- Vessel fire
- Vessel salvage

The first priority in a vessel casualty is the safety of the crew and any other personnel in the area. Search and Rescue and firefighting are typically human safety issues. These emergencies and their relationship to follow-on phases of spill clean-up and vessel salvage are described below.

The SAR (Search and Rescue) Mission Coordinator (SARMC) responds to missing or endangered vessels by deploying Coast Guard or other available rescue resources. This individual will be the local Coast Guard Group Commander or District Commander in whose zone the vessel casualty occurs. The On-Scene Commander will typically be one of the units responding. Until the safety of the vessel's crew is ensured, the control of the incident will not shift to the Captain of the Port as the Federal On-Scene Commander for Oil Spills or for a Vessel Fire.

In the event of a Vessel Fire or a Fire at a Marine Facility, the Marine Firefighting Contingency Plan, (MFCP), will be implemented. This plan can be used in conjunction with this Oil Spill Contingency Plan to enhance operations. Tab (L) of this ANNEX describes the relationship of firefighting to Oil Spill response as well as the use of the Marine Firefighting Contingency Plan (MFCP).

While pollution response clearly takes priority over salvage efforts, the two responses may necessarily be conducted concurrently. Salvage operations could be critical to preventing any further discharge of oil. The FOSC will prioritize actions to avoid interference between salvage and pollution response efforts.

### **Salvage Operations:**

Parties involved in salvage response should refer to Chapter 8, Volume I of the U.S. Navy Salvage Manual for specific information relating to salvage techniques. A listing of salvage resources, is contained in Tab G to Appendix III of Annex F of this plan. Guidelines for communications between all involved parties are provided in Annex K of this plan.

Salvage efforts may be divided into **three phases**: stabilization, refloating, and post-refloating. During the stabilization phase, salvors take steps to limit further damage to the vessel, and to keep the ship from being driven harder aground or broaching. Response leaders gather information and formulate a salvage plan. That plan specifies actions to be taken during the refloating and post-refloating phases of the salvage. The refloating phase commences when the salvage plan is executed and ends when the ship begins to move from her strand. During post-refloating, the vessel is secured and delivered to the designated port facility.

### **Stabilization Phase:**

Stabilization of the vessel immediately following grounding is the responsibility of the vessel's master. Prudent immediate actions include, but are not limited to: accurate assessment of the situation including crew safety,



ship damage and potential for discharge of pollutants; taking immediate damage control measures such as securing watertight closures; ballasting of intact tanks to reduce working of vessel; notifying the local Coast Guard Captain of the Port, Vessel Traffic Service and the vessel's owner or agent; and requesting tug, salvage, and lightering assistance, as needed. The Officer in Charge of Marine Inspections (normally same individual as the Captain of the Port) will mobilize the Coast Guard duty marine inspector and investigator; they will begin an assessment of the extent of damage and cause of the incident, respectively.

Prudent actions **would not** include the following: jettisoning weight in an attempt to lighten the ship prior to backing off the vessel; attempting to back the vessel off with a breached hull; failure to take proactive action to stabilize the ship and determine its condition.

Upon arrival, the salvage ship or vessels, and personnel, should conduct damage control and position stabilization. Damage control actions may range from augmenting the ship's crew to conducting firefighting and flooding control. Position stabilization consists of securing the ship at the first opportunity to prevent it from broaching or being driven further ashore.

In preparation for development of the salvage plan, the salvor must conduct a thorough salvage survey of the vessel and its immediate surroundings. The survey is defined in the Navy Salvage Manual as being comprised of: the preliminary survey; the detailed hull survey; the topside survey; the interior survey; the diving survey; the hydrographic survey; and the safety survey. The salvor should refer to Section 8-2.6 of Volume I of the Navy Salvage Manual for details. The information may be recorded on the salvage survey form included in Appendix I, Chapter 8, Volume I of the Navy Salvage Manual, or on a form of the salvor's choosing. The information requirements of the Navy form are extensive and should be completed only to the extent that they are appropriate to the salvage problem at hand.

#### Refloating Phase:

The salvage plan is implemented during this phase. The plan should be considered a flexible working plan with appropriate changes made in response to changing conditions. During this phase, all parties must be in close communication, and the process should be brought to a halt if significant safety problems develop. The salvor, responsible party, and the Captain of the Port have the authority to stop salvage operations in this case.

Working with the Responsible Party and the naval architect, the salvor must develop a salvage plan. The plan must detail actions to be taken and resources to be used, and it must set organizational responsibilities and the anticipated schedule. **After the plan is prepared and prior to initiating salvage operations, the Responsible Party must submit the plan to the Federal On Scene Coordinator or his designated representative, for review.** The Federal On Scene Coordinator will review the plan, and approve or disapprove it based upon real or potential risks to port safety and the environment. When steps must be taken immediately, the FOSC will respond to the Responsible Party within a time frame appropriate to the situation regarding those steps. Any plans for the intentional jettisoning of cargo will be reviewed as part of the salvage plan. The salvage plan should include the following:

- Basic information identifying the ship's characteristics and the condition of the stranding
- An analysis prepared by the salvor and naval architect, which provides estimates of:
  - the ground reaction
  - the freeing force
  - location of the neutral loading point (point at which weight can be added w/out change in ground reaction)
  - stability grounded and afloat

strength of hull girder, damaged areas, attachment points, and rigging  
a summary of the engineering rationale employed for selection of retraction and refloating techniques  
hydrographic information  
potential pollution risks

- List of specific safety hazards involved
- Means for controlling interference between pollution response efforts and salvage efforts
- Appendices which provide detailed information regarding techniques to be employed
- Location to which the vessel will proceed following refloating
- Means for controlling the vessel as it is freed
- Vessel escort, if any, to be employed
- Means for delivering vessel to destination (tow, own power)
- Any preparation of vessel necessary to gain permission for entry into port of destination
- Means of disposal if other than as described above

#### Post Refloating Phase:

This phase commences when the ship begins to move off the strand, and is completed when the ship has been delivered to a safe haven or repair facility. In addition, salvage resources and equipment should be removed from the salvage site. The options for disposal of the vessel include:

- Steaming into port, or to another location within the port
- Towing to safe haven
- Anchoring in preparation for tow or temporary repairs
- Beaching if the ship is in danger of sinking
- Scuttling or sinking

The following salvage plan items are to be updated, as necessary, following refloating:

- Overall seaworthiness
- Condition of vessel's bottom, for damage hidden by the strand
- Condition of piping systems and machinery
- Condition of all ship's systems necessary for the transit
- Ship's stability, list, and trim (may necessitate loading or shifting of weights)
- Patching and pumping arrangements for compartments in way of damage
- Towing bridle, day marks, and navigation lights (an insurance line should be rigged even when the ship proceeds under its own power)

If the vessel will steam or be towed to another location, the safe haven should be identified as early as possible due to the expected public and media interest that will accompany the vessel. Approval for the port entry by both the Coast Guard Captain of the Port and State of California must be received prior to the vessel transit. The Department of Fish and Game, Office of Oil Spill Prevention and Response (OSPR) will be the single State of California point of contact for the entry approval. Hull stability, cleanliness, "tracking" during entry, and response to anticipated oil discharges on drydocking must be addressed by the owner to the COTP and OSPR prior to port entry.

Following this phase, the Responsible Party shall submit a completed form CG-2692 to the Officer in Charge of Marine Inspection and submit all requested information to the Senior Investigating Officer of the Marine Safety Office.



### Salvage Response for Other Than Strandings:

Salvage assistance may also be required for vessel sinkings and rescues (towing). In these cases, the relationships between the various parties remain the same as for strandings. For sinkings, the salvor must focus on methods for refloating the vessel, and vessel stability as it is refloated. For rescue situations, development of a comprehensive salvage plan may not be necessary. Use of good marine practice in establishing and maintaining the tow, and coordination with the vessel's master, tow vessel, Coast Guard SARMC, the Captain of the Port, and the vessel's owner/operator may suffice. In either of these cases, the user of this plan should follow the guidelines presented, adapting them to the specific salvage requirements at hand.

### Navy SUPSALV Assistance:

**In the event that the Responsible Party does not respond to the casualty, the federal government may respond to the salvage requirement, utilizing the services of Navy Supervisor of Salvage. However, financial responsibility remains with the responsible party.**

Navy Supervisor of Salvage services may be obtained by:

- (1) Telephoning Supervisor of Salvage Operations (703)607-2758  
After hours and weekends (NAVSEA Duty Officer) (703)602-7527
- (2) Initiating a message to:  
CNO WASHINGTON DC//N312/N866//  
Add the following if applicable:  
//N45// for oil pollution  
//N873// for diving support  
Info copy to: COMNAVSEASYS COM WASHINGTON DC//00C//  
Text should include: a brief description of services required;  
location; urgency; point of contact; and telephone number. If the  
task is urgent and requires immediate mobilization, the message  
should amplify this and include a statement that funding will be  
provided by separate correspondence.

SUPSALVAGE can provide the services of naval architects, may provide the services of naval salvage vessels, and has access to contracts which will provide the services of commercial salvors and equipment. SUPSALVAGE developed and has available software for rapid analysis of longitudinal strength and intact/damaged stability. The software is known as Program of Ship Salvage Engineering (POSSE). In some cases, software already in use onboard the vessel may provide sufficient information.

### Coast Guard Marine Safety Center Technical Support:

Technical support is also available from the Coast Guard Marine Safety Center Salvage Team. This group can evaluate vessel stability, hull strength, and salvage plans, and may also be available to go on scene. MSC may be able to provide vessel plans for U.S. or foreign flag vessels. The Federal On-Scene Coordinator may obtain services of MSC by calling (202) 366-6481 during business hours, or by calling FLAGPLOT at (202) 267-2100, after hours.

## **TAB N WILDLIFE RECOVERY**

### **A PRELIMINARY CALIFORNIA WILDLIFE RESPONSE PLAN**

#### **I. Introduction**

#### **II. Response Strategies**

- A. Primary Response
- B. Secondary Response
- C. Tertiary Response

#### **III. Wildlife Treatment and Rehabilitation Resources**

- A. Mobile Equipment
- B. Temporary Facilities for Oiled Wildlife Care
- C. Permanent Facilities for Oiled Wildlife Care
- D. Cooperating Wildlife Conservation Organizations with Trained Volunteers

#### **IV. Wildlife Contingency Plans**

- A. Sea Otter Contingency Plan
- B. Marine Mammal Contingency Plan
- C. Marine Bird Contingency Plan

#### **V. Natural Resource Damage Assessment: Documentation of Injury to Marine Wildlife**

#### **VI. Permit Requirements and NMFS Guidelines for Oiled Wildlife Response Activities**

#### **VII. References**

#### **I. INTRODUCTION**

The purpose of this document is to assist the U.S. Coast Guard in responding to marine wildlife problems in their role as the Federal On-Scene Coordinator during an oil spill.

This document is a first effort to show the responsibilities and capabilities of the various organizations and agencies involved with the management of marine wildlife and provide an outline for a California Wildlife Response Plan that will be developed over the next few years.

This plan deals with those wildlife capture, handling, and transportation activities that would take place under the authority of the Incident Command during spill response and cleanup. Plan sections dealing with wildlife treatment and rehabilitation procedures away from the spill site will be addressed in the future.

Wildlife response activities during past oil spills were largely uncoordinated efforts during which State and

Federal agencies lacked the resources or preparation to effectively coordinate a response. Agencies, responsible parties, volunteer organizations and wildlife rehabilitations groups were only loosely coordinated during ad-hoc rescue, treatment and damage assessment activities.

In 1990, the President signed the Oil Pollution Act (OPA-90) requiring the development of a “fish and wildlife response plan” in consultation with the U.S. Fish and Wildlife Service, the Department of Commerce National Oceanic and Atmospheric Administration, and other interested parties including the State fish and wildlife agencies. OPA-90 required that the fish and wildlife response plan include “immediate and effective protection, rescue, rehabilitation of, and the minimization of risk of damage to fish and wildlife resources and habitat that are harmed or that may be jeopardized by a discharge. The fish and wildlife response plan required by OPA-90 has been renamed, “Fish and Wildlife and Sensitive Environment Plan” and is currently in draft form.

OPA-90 authorizes Federal resource trustees (Department of Agriculture, Department of Commerce, Department of Defense, Department of Energy, Department of Interior), State resource trustees (designated by the governor of each state), federally- recognized Indian tribes, and foreign trustees to seek compensation for injuries to natural resources caused by a discharge of oil. In California, the governor will designate the Resources Agency or Cal EPA to serve as Lead Administrative Trustee depending upon the resources affected. The National Oceanic and Atmospheric Administration (NOAA) is in the process of promulgating regulations for natural resource damage assessment (NRDA) resulting from discharge of oil. These regulations will supersede the Department of the Interior (DOI) NRDA regulations for oil spills.

California legislation SB 2040 (1990) parallels some provisions of OPA-90 in requiring the Administrator of the Office of Oil Spill Prevention and Response (OSPR) to develop contingency plans for the protection of fish and wildlife, assess damages to natural resources, establish rescue and rehabilitation stations for marine wildlife, and require restoration plans for wildlife habitat following spills.

During future oil spills in California, a wildlife response will be triggered by the OSPR through the 24-hour dispatch center. Responsible State and Federal trustee agencies will be contacted immediately along with wildlife rescue and rehabilitation volunteer organizations (see flow chart).

With the creation of the OSPR in 1991, considerable State personnel and equipment resources were dedicated to oil spill planning, response, enforcement, and natural resource damage assessment. The ability within California today to undertake a wildlife response during a spill is far superior to that which existed prior to 1991. Even so, many planning efforts are still underway and the capabilities of rehabilitation facilities are as inadequate today as they were in the 1980's. Pending California legislation could, however, establish a fund to construct new wildlife rehabilitation facilities and augment existing facilities alleviating this problem.

The only wildlife species for which specific oil spill contingency planning has been attempted is the California Sea Otter. The contingency plan for that species is incorporated and will serve as a model for plans that are still being developed for marine birds and pinnipeds.

A page follows which show the anticipated needs for U.S. Coast Guard support of wildlife response activities during an oil spill.

The effectiveness of future wildlife response efforts will depend on the participation of all interested parties in this planning process and the commitment of adequate public and private personnel and equipment resources to meet the challenge.

Anticipated Needs for U.S. Coast Guard Equipment

and Staff Support to Augment a Wildlife Response  
by the Trustee Agencies

Small Spill Scenario:

- One skiff (17-25 feet) and one inflatable boat (12-15 feet) with operators for wildlife capture and transport.

Medium Spill Scenario:

- Two skiffs and two inflatable boats with operators.
- One flat-bed truck with hoist and driver for animal transport.
- Part-time helicopter support for animal transport.

Large Spill Scenario:

- Three skiffs and five inflatable boats with operators.
- Two flat bed trucks with hoists and drivers.
- Full-time helicopter support for animal transport.

## II. RESPONSE STRATEGIES<sup>1</sup>

### A. Primary Response

The primary response for protecting marine wildlife from an oil spill is to prevent the oil from reaching areas where marine wildlife are concentrated utilizing standard response techniques such as:

Booms, dikes, berms, mechanical skimming, sorbent materials, in-situ burning, and dispersants.

Spill response strategies and techniques affecting wildlife are addressed in other Area Plans and will not be considered further here except for the following comments.

When in-situ burning is considered, prior to and throughout the effort, birds within the burn area should be hazed away or captured if they become contaminated.

The application of dispersants over large concentrations of birds should be avoided. Dispersants wash the natural oils off their feathers, reducing the insulation and buoyancy. After dispersants have mixed with water, their danger to birds is reduced but not entirely eliminated. (The position of large flocks fluttering over or sitting on the water should be carefully noted during reconnaissance flights and avoided when applying dispersants.) During a spill response the Wildlife Trustee Agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Game) will advise the Unified Command on the use of appropriate response strategies.

Marine wildlife breeding colonies, migration staging areas, haul- outs, roosting areas, foraging habitats and other key wildlife habitats are considered elsewhere in the “Environmental Sensitivity” Area Plans.

## **B. Secondary Response**

### **Birds**

The secondary response to protect birds from an oil spill is to deter them from the slick or contaminated habitat. In many cases, birds must be deterred from contaminated areas repeatedly and frequently. There are circumstances where dispersal of birds will not be feasible. If a broad expanse of open water is affected, or if there are predominately diving birds, dispersal will only have limited effectiveness at best. Whenever possible, however, dispersal of birds from the immediate and adjacent areas of the spill, should be attempted.

A number of factors must be considered in determining locations for placement of dispersal (hazing) equipment. Oil will spread out and move with winds, tides and currents. Time may not permit coverage of all areas with birds which might become oiled. Selection of dispersal areas may have to be based on threatened or endangered status, the ability of species to recover losses, and the effectiveness of the hazing techniques on species present. Some dispersal methods may not be advisable in highly populated areas due to the noise they make or safety risks to people. Also oiled birds should not be dispersed since this can lead to introduction of oiled animals into uncontaminated populations.

Results are likely to be most effective in winter when birds are concentrated in coastal lagoons, estuaries and bays. Migratory birds may have a strong tendency to return to contaminated staging areas.

The devices and methods used for bird dispersal are generally grouped into visual and auditory, or a combination of both. The appropriate choice of method depends on the species involved, the surrounding environment, and the spill situation.

### **Visual Methods**

Stationary Figures: A human effigy has been shown to be effective for deterring birds during daylight.

Helium-Filled Balloons: Helium-filled balloons have been used successfully to prevent birds from landing in fields and on water.

### **Auditory Methods**

Propane Cannons and AV-alarms: These devices have varying effectiveness by bird species and usually for only a short period of time, i.e., two to three days maximum. They would probably not be effective in rough, open sea conditions.

Other Noisemakers: The playback of recorded sounds of alarmed birds has been shown to be effective especially so if done in conjunction with detonators. Shell crackers ignited from land and boats were effective deterrents in previous spills.

### **Visual and Auditory Methods**

## Herding or Hazing with Aircraft:

This technique is used primarily for waterfowl. Helicopters have been effective in herding flightless birds (young or molting).

**Herding with Boats:** Herding with boats may be effective for flightless waterfowl but is ineffective for diving birds. With several boats, birds can be herded into protected or boomed areas which are not contaminated with oil. Airboats may be more effective for hazing many species of birds where water conditions allow their use, for example, in protected bays and marshes.

Secondary response will be undertaken by U.S. Fish and Wildlife Service and California Department of Fish and Game (CDFG) personnel utilizing hazing equipment which will be available at short notice by the CDFG/OSPR.

**Capture and Relocation:** Small populations of endangered or critically sensitive birds may be captured with cannon, rocket and drop nets, net guns, and swim or walk-in traps. Once captured, these birds should be transferred to “safe” areas away from the spill or holding facilities. However, this is very labor intensive and will not be practical in most cases.

## Marine Mammals

Previous attempts at visual and auditory hazing of marine mammals including sea otters have not proven effective to date. Pinnipeds can not be effectively excluded from selected areas by the use of noise making or explosive devices or the use of boats.

Preemptive capture of marine mammals including sea otters to prevent contact with oil has been proposed and occasionally attempted. This activity may occur only at the request of Incident Commander and under the authority of the State and/or Federal Trustee Agencies. Methods for capture and transport of sea otters can be found in the attached Draft Sea Otter Contingency Plan. Methods for capture of other marine mammals may include walk-in traps, dip nets, net guns, and tangle nets and will be covered in future versions of this document under Marine Mammal Contingency Plans.

## C. Tertiary Response

### Birds

The tertiary response to protect birds from an oil spill is the capture, rehabilitation and release of oiled birds. This decision will be made by the State and Federal trustee agencies.

### Capture and Transport of Oiled Birds

Human safety should be considered before any bird retrieval effort is conducted: an oil spill may present several safety hazards including toxic vapors, fire hazard, hazardous weather and seas, unsafe footing, or icy rivers. All personnel involved in retrieval should have appropriate safety training, be adequately protected, (rubber boots and gloves, etc.) and be trained in handling techniques that protect human safety and present the least amount of stress to birds. These issues are addressed in the volunteer coordination and management plan.



Teamwork is essential to minimize stressing oiled birds. As they lose their waterproofing many species of birds move to shore, first preening on open beaches and river banks and later hiding under cover. Birds in this condition should be retrievable by teams on foot.

Beached birds should be approached quietly from the water's edge. This technique is much more effective if retrieval crews are in place shortly before dawn. In marine environments, boats and long-handled dip nets can be used as an approach at low tide for birds that have come ashore. Certain types of birds may be baited in close to a boat by "chumming" with fish or squid, and captured with a long-handled net. Several species may also be effectively captured from a boat with a netgun within a 10-15 meter range.

Where possible, it is advisable to close beaches and shorelines to the public and permit access only to those people designated to capture birds.

As birds are captured, immobilization is accomplished by placing towels, sheets or nets over the entire bird. Birds should be carefully handled through light coverings that minimize damage to feathers and human exposure to oil.

Netted birds are gently removed from the netting and completely covered with cloth. Wings must be folded normally against the body. A small bird can be secured against the handler's abdomen at waist level using one hand to cradle the bird while the other hand is placed on the back. Larger birds and some species with sharp bills should be carried in a reverse body hold.

Aggressive birds such as raptors, cormorants and herons can seriously injure handlers. The most important consideration is to restrain the head firmly without causing any injury. In addition, raptors should have their legs secured as well.

After capture, birds should be immediately placed in ventilated, solid-sided carriers such as cardboard boxes or plastic airline kennels for transport. Social, nonaggressive birds can be placed with one or two conspecifics, but aggressive species such as loons and cormorants should be individually housed.

Crated birds must be evaluated frequently for overheating when ambient temperatures are above 20C (70F) and for possible chilling in cooler weather. If birds demonstrate open-mouthed breathing or other signs of heat stress, additional ventilation holes can be made or the number of birds per carrier can be decreased. Captured birds should receive medical evaluation and preliminary treatment by trained personnel within 1 to 2 hours, if possible.

It is important that all observations of oiled birds be noted by oil spill response personnel whether a capture is made or not, so that an accurate assessment of the oil spill can be made. All dead birds retrieved will be placed in appropriate packaging materials, properly labeled and brought to a central processing location. Personnel from the CDFG-OSPR and the USFWS will be present to implement processing protocols which will protect the chain of custody, and proceed with the natural resource damage assessment prior to routing the birds to rehabilitation facilities.

## Marine Mammals

### Capture and Transport of Marine Mammals.

Pinniped captures will only be attempted after evaluating each situation on a case-by-case basis and concluding that the potential benefits of capture far outweigh the potential negative consequences. The species involved, its size and its location with respect to other marine mammals will be major factors considered when making the decision of whether or not to capture and, if capture is opted, the method used. Captures will generally be of isolated individuals on beaches, spits, tide flats or other relatively flat surfaces utilizing shield boards and brail nets. Less often, captures could be attempted from rock jetties, piers, docks or even in the water for several debilitated animals. Long handled dip nets, floating bag nets and a net gun have all been used with some success. Each of these situations will require experienced capture personnel from one of the marine mammal rehabilitation centers. Transport will be in portable pet kennels of an appropriate size or similar cages. Shaved ice will sometimes need to be provided to avoid overheating.

### III. Wildlife Treatment and Rehabilitation Resources

#### A. Mobile Equipment

##### 1.) The DFG-OSPR Mobile Equipment. (Available statewide within 10-12 hours)

a) One mobile veterinary laboratory. A 1 ton Ford PU chassis, approximately 22 feet long. Includes telephone and CDFG radio, an operating/examination table also capable of washing oiled animals (few), electrical generator, refrigerator, sink, 15 gallon propane tank, 40 gallon water tank, 40 gallon waste water tank, gas anesthesia machine, centrifuge, misc. laboratory equipment and space, air conditioning and three built-in kennels can recycle water from 1 inch hose. Location: DFG/OSPR, Rancho Cordova (RC).

b) One Veterinary truck. A 3/4 ton 4 wheel drive Chevy PU chassis with a Bowie Vet Box. Includes CDFG radio and telephone, refrigerator, hot and cold water, disinfectant water, 40 gallon water tank, slide-out examination/operating table, electrical generator, winch, air pressure tank, and a portable anesthesia machine. Location: RC.

c) Two 22' cleaning and rehabilitation trailers. These include 12 built-in kennels (which are each divisible in half to total 24 cage spaces), two animal wash stations, 120 gallon water tank, 50 gallon propane tank, propane water heater, 100 gallon waste water tank can receive water from 1 inch hose, air conditioning and two 6 KW generators each. Location: RC.

d) One 40' Mobile Oiled Bird Cleaning and Rehabilitation Trailer (MOBCART). A 40 foot trailer with ten bird wash stations, nine rinse stations, oily water holding tank, six 125,000 BTU propane powered tankless water heaters, and water softener hook-ups. For full water capacity, requires two one-inch hose service at 65 psi. Propane and 120 volt AC electrical outlet are necessary at destination. Location, Clean Seas' yard, Carpenteria.

e) Three bird cleaning and rehabilitation equipment trailers (bird trailers). These contain a variety of bird rescue and rehabilitation supplies, including portable plywood pens, bedding, wading pools, netting capture nets, gloves, scales, blenders, soap, etc. They are currently being renovated and resupplied. Current locations, two at RC and one at Upper Newport Bay Ecological Reserve.

2.) Texaco Company Mobile Equipment. Five Sea Otter Cleaning and Rehabilitation Modules. Each module contains equipment; including gloves, rain gear, boots, towels, hoses, buckets, garbage cans, dip nets, space heaters, pet dryers, cages, data forms, etc. Location Texaco, Port Hueneme.



## B. Temporary Facilities for the Care of Oiled Marine Wildlife

### San Francisco MSO

State Park District HQ in Eureka  
(707) 445-6547 - 600A W. Clark, Eureka, CA  
About 2,000 sq. ft. available  
Some office space, restrooms attached  
Water on site  
Heat and ventilation available  
No oily wash water disposal on site

Patrick's Point State Park Maintenance Yard  
(707) 677-0371  
New facility with 1,500 sq. ft. vehicle service bays  
Some office space, restrooms attached  
Water on site  
Heat and ventilation available  
No oil wash water disposal on site

Redwood Acres Fairground - Eureka  
(707) 445-3037 - ask for manager  
Private facility  
3 heated buildings 2,000, 6,000 &  
13,000 sq. ft.  
Restrooms on site  
Water available  
No oily wash water disposal  
Heavily used, probable schedule conflicts

County Fairgrounds at Ferndale  
(707) 786-9511 - ask for manager  
Private facility  
20,000 sq. ft. heated building with linoleum floor  
Restrooms on site  
Water available  
No oily wash water disposal  
Heavily used, probable schedule conflicts

Woodley Island Marina - Jack Alderson  
(707) 443-0801  
No structure but couple of acres available for Temporary  
structures  
Electricity on site  
Water (hot and cold) and restrooms available  
Oil/water separator on site  
Near wildlife refuge (Woodley, Indian, and Daby Islands)

Moss Landing PG&E Power Plant

Moss Landing Oiled Bird Rehabilitation Facility  
Contact Steve Abbott (408) 633-6649

LA/LB MSO

Port of Los Angeles, (310) 732-7678  
Seal Beach Naval Weapons Station, (310) 594-7011

San Diego MSO

North Island Naval Air Station,  
Executive Officer (619) 545-8175  
Camp Pendelton, Duty Officer (619) 725-5617  
San Diego Port Authority,  
Paul Libuda, (619) 686-6340  
U.S. Navy, LCMR Jerry Abbott, (619) 532-1824

C. Permanent Facilities Willing to Assist in the Rescue  
and Care of Oiled Wildlife and Designated Contact Person

San Francisco MSO

North Coast Marine Mammal Center  
424 Howe Street  
Crescent City, California  
Mr. Jim Lentz  
(707) 465-6265

Humboldt Wildlife Care Center  
516A Rock Pit Road  
Fieldbrook, California 95521  
Daniel Oram  
(707) 839-8663

Bird Rescue Center  
3430 Chanate Road  
Santa Rosa, California 95404  
Ms. Crystal Norris  
(707) 523-2473

The Marine Mammal Center  
Marin Headlands - GGNRA  
Sausalito, California 94965  
Ms. Peigin Barrett  
(415) 289-7325

California Center for Wildlife  
P.O. Box 150957  
San Rafael, California 94915  
Ms. Mary S. Kmak  
(415) 456-7286

International Bird Rescue and Research (IBRRC)  
699 Potter Street  
Berkeley, California 94710  
Mr. Jay Holcomb  
(510) 841-9086

Peninsula Humane Society-Wildlife Care Center  
12 Airport Boulevard  
San Mateo, California 94401-1098  
Ms. Susan Kelly  
(415) 340-7022 (ext. 376)

Injured and Orphaned Wildlife  
P.O. Box 6793  
San Jose, California 95150  
Ms. Dodi Franklin  
(408) 946-4212

The Lindsay Museum  
1901 First Avenue  
Walnut Creek, California 94596  
Mr. Stephen Barbata  
(510) 935-1988

Native Animal Rescue  
2200 Seventh Ave.  
Santa Cruz, California 95062  
Ms. Carla Eilrich  
(408) 462-0726

Monterey SPCA  
P.O. Box 3058  
Monterey, California 93924  
Ms. Lisa Hoefler  
(408) 373-2631 ext. 224

Pacific Wildlife Care  
P.O. Box 3257  
San Luis Obispo, California 93403  
Ms. Sue Patton or Mr. Tom Muran  
(805) 489-0411 (805) 466-2125

## Los Angeles/Long Beach MSO

Santa Barbara Wildlife Care Network  
P.O. Box 6594  
Santa Barbara, California 93160  
Ms. Estelle Busch  
(805) 966-0568

Wildlife on Wheels (International  
Bird Rescue Research Center South)  
P.O. Box 512  
Sunland, California 91041-0512  
Ms. Mimi Wood  
(818) 951-3656

Friends of the Sea Lion Marine Mammal Center  
20612 Laguna Canyon Road  
Laguna Beach, California 92651  
Ms. Judith K. Joner  
(714) 494-3050

All Creatures Care Cottage  
(Alliance for Wildlife Rehabilitation and Education- AWRE)  
1912 Harbor Boulevard  
Costa Mesa, California 92627  
Dr. Joel Pasco  
(714) 642-7151

Marine Mammal Care Facility at Fort MacArthur  
3601 S. Gaffey St.  
San Pedro, California 90731  
Don Zumwalt (310) 548-5677, Pager (310) 490-5978

## San Diego MSO

Sea World of California/Hubbs Research Foundation  
1720 South Shores Road  
San Diego, California 92109  
Mr. Jim Antrim, General Curator  
(619) 222-6363

Project Wildlife (Located at the San Diego Humane Society)  
P.O. Box 80696  
San Diego, California 92138-0696  
Ms. Jackie Flesch (619) 692-0914,  
Ms. Meryl Faulkner (619) 459-9137,  
or Ms. Michelle Wikander (619) 264-6638

D). Cooperating Wildlife Conservation Organizations with  
Trained Volunteers

San Francisco MSO

California Ocean Assistance Spill Team  
Friends of the Sea Otters  
140 Franklin Street #309  
Monterey, CA 93940  
Ellen Faurot-Daniels  
(408) 373-2747  
(408) 726-1750

Los Angeles/Long Beach MSO

Marine and Mountain Wildlife Rescue  
23715 W. Malibu Road  
Malibu, CA 90265  
Allan Rosen-Ducat  
(310) 457-3445  
(310) 457-9453

Cabrillo Museum  
3720 Stephen White Drive  
San Pedro, CA 90731  
Steve Vogel  
(310) 548-7546  
(310) 7563

Amigos de Bolsa Chica  
5811 McFadden Avenue  
Huntington Beach, CA 92649  
Phil Smith  
(714) 960-0262  
(714) 897-7003

San Diego MSO

Mesa College  
7250 Mesa College Drive  
San Diego, CA 92111-4998  
Dr. Scott Haskell  
(619) 627-2600  
(619) 627-2832

#### IV. Wildlife Contingency Plans

##### A. DRAFT SEA OTTER-OIL SPILL CONTINGENCY PLAN FOR CALIFORNIA (Condensed Version)

Background - Members of the sea otter task force (which included representatives of all government agencies with relevant authorities, oil companies and their consultants, clean-up cooperatives and interested animal welfare organizations) agreed in 1989 that a permanent sea otter cleaning and rehabilitation facility should be established. It was also agreed that the facility should be located along the coast within the current geographical range of the California population of sea otters and that it be capable of processing 15 oiled sea otters per day, rehabilitating 125 at one time and holding 200 relatively long term (i.e., up to several months). This project is in progress, but will take several years to complete. In early 1990, most of the following general interim plan was agreed upon, and will remain in effect, subject to changes resulting from new knowledge or new consensus, until the permanent cleaning and rehabilitation facility becomes operational.

All oiled marine wildlife rescue response activities will be coordinated through the California Department of Fish and Game's (DFG) office of Oil Spill Prevention and Response (OSPR) Incident Command structure with the Federal On Scene Coordinator (FOSC). DFG, the lead agency in wildlife rescue response in California (under an MOU with the USFWS), will act in concert with USFWS in sea otter matters.

Interim Facilities - In the event of an oil spill (prior to the construction of the permanent sea otter cleaning and rehabilitation center), where sea otters are threatened with major contamination or are contaminated to the extent that capture and husbanding or capture, cleaning, rehabilitation and husbanding are deemed appropriate, a rescue response will be mobilized. Five facilities with extensive marine mammal care capability and expertise as well as the Pacific Gas and Electric Company's electricity generation plant in Moss Landing (PG&E-ML) have indicated an interest in participating in an interim cleaning and rehabilitation operation. The five are, roughly in the order they would be brought on line, 1) Monterey Bay Aquarium (MBA), 2) Long Marine Laboratory - UCSC (LML), 3) The Marine Mammal Center (TMMC), 4) Marine World-Africa USA (MW-AUSA) and 5) Sea World (SW) (Table 1). Floating, holding pens for holding larger numbers of rehabilitated or preemptively caught sea otters may be installed at Moss Landing Harbor in cooperation with PG&E-ML personnel. Initially, MBA, LML, and MMC will be fitted with the minimum equipment necessary to clean sea otters. Oiled sea otters could be cleaned and held at these three facilities. MW- AUSA and SW, at least initially, will only be used to hold sea otters if necessary.

**Table 1. Interim Facilities List Including Primary Contact Persons  
and Other Important Contact Persons**

| Monterey Bay Aquarium | Office        | Home          |
|-----------------------|---------------|---------------|
| Dave Powell           | (408)648-4827 |               |
| Charles Farwell       | (408)648-4826 |               |
| Tom Williams, DVM 1   | (408)648-4839 | (408)375-5570 |
| Julie Hymer 1         | (408)648-4829 | (408)646-9020 |
| Candice Tahara 1      | (408)648-7932 | (408)649-5964 |
| Marcie Tarvid         | (408)648-4829 | (408)372-2903 |
| Linda Yingling        | (408)648-4829 | (408)646-6541 |
| Susan Rainville       | (408)648-4829 | (408)633-5047 |
| Brian Kawakami        | (408)648-4829 | (408)899-5555 |
| Peter Ferranti        | (408)648-4828 | (408)375-5534 |
| Michelle Staedler     | (408)648-4976 | (408)688-0465 |

Marianne Riedman (408)648-4977  
after hours (security) (408)648-4840

Long Marine Laboratory, UCSC

Gary Griggs (408)459-2403  
Steve Davenport 1 (408)459-4771  
Howard Rhinehart 1 (408)459-3135  
Dave Casper, DVM 1 (408)459-3135 (408)688-2773  
Keith Skaug (408)459-4735  
after hours  
(Rhinehart's beeper) (408)685-5410

The Marine Mammal Center

Peigin Barrett 1 (415)289-7337 (415)454-1613  
Peigin's pager (415)485-2130  
Ken Lee (415)331-7331 (415)222-0680  
Sandy Morgan 1 (415)289-7336 (707)252-4041  
Dawn Smith (415)289-7349 (415)488-0728  
Laurie Gage, DVM 1 (707)644-4355 (707)255-9044  
Lance Morgan (415)289-7343 (707)935-7858  
Krista Hanni (415)289-7344 (415)647-2394

Marine World - Africa USA

Pat Foster-Turley 1 (707)644-4000  
Patrick Foster-Turley (707)644-4000

Sea World

Jim Antrim 1 (619)226-3830  
Tom Goeff 1 (619)226-3830  
after hours (619)222-6362

PG&E Plant, Moss Landing

Steve Abbott 1 (408)633-6649

Golden Gate National Recreation Area

Chuck Bearlin 1 (415)556-2920

Training - Periodic sea otter handling and husbandry training will be conducted. Introductory training will be similar to that sponsored by Texaco on 28 Mar 90 in Monterey California. Specific training for veterinarians/AHTs, husbandry personnel and for capture and transport personnel should similarly be provided, with overviews of those skills being included in the introductory training. Volunteers, where needed, will be selected from the pool created by the Friends of the Sea Otter's and The Marine Mammal Center's volunteer training programs.

Capture and Transport - Capture and transport will be conducted primarily by trained DFG and USFWS personnel (Table 2). Logistical support will be available from the Fishermen's Oil Response Team. If additional help is needed, we could contract with Wildlife Rapid Response Team, Inc. (WRRT) and/or International Wildlife Research (IWR).

Each captured sea otter will be flipper tagged (with Temple, original, cattle size ear tags) and PIT tagged (passive integrated transponder) subcutaneously in the loose skin between the right heel and the tail. Captives will be held and transported in #300 or #400 sky kennels fitted with a raised bottom grate. Shaved ice or any other form of fresh water ice (to combat dehydration) and a chew toy or toys (to combat tooth damage) would usually be a good idea in transport kennels. Food should be offered only if transport time is to be more than four or five hours to lessen additional fur fouling. Cleaning and rehabilitation at the five interim facilities will be conducted by pretrained resident staff, DFG, USFWS and trained volunteers. Each site's support accommodations will be bolstered as necessary. For example, trailer(s) for the additional personnel to dress and take breaks in or trailer(s) for otter stabilization and/or intensive care may be necessary. Additional freezer and/or refrigerator space for food storage may also be necessary.

**Table 2. List of DFG, USFWS and Other Personnel With Capture<sup>1</sup> and/or Handling<sup>2</sup> Expertise**

| CDFG                       | Office        | Home          |
|----------------------------|---------------|---------------|
| Fred Wendell 1,2           | (805)772-1261 | (805)489-1687 |
| Chris Pattison 1,2         | (805)772-1261 | (805)541-0397 |
| Bob Hardy 1,2              | (805)772-1261 | (805)466-3466 |
| Mike Harris 2              | (805)772-1261 |               |
| Jack Ames 1,2              | (408)649-2870 | (408)633-5294 |
| Jack Ames' pager           | (916)326-0245 |               |
| Paul Wild 2                | (408)649-2870 |               |
| limited experience         |               |               |
| Jim Hardwick 1,2           | (707)552-0983 |               |
| Larry Espinosa 1,2         | (408)649-2888 |               |
| Bob Lea 1,2                | (408)649-2880 |               |
| David VenTresca 1,2        | (408)649-2881 |               |
| Gary Ichikowa 1,2          | (408)633-3700 |               |
| Jon Goetzl 1,2             | (408)633-3700 |               |
| USFWS                      |               |               |
| Research - UCSC            |               |               |
| Jim Estes 1,2              | (408)459-2820 | (408)475-4964 |
| Mike Kenner 1,2            | (408)459-3244 | (408)728-3964 |
| Research - Piedras Blancas |               |               |
| Brian Hatfield 1,2         | (805)927-3893 | (805)927-4063 |
| Ron Jameson 1,2            | (805)927-3893 | (805)927-3428 |
| Galen Rathbun 1,2          | (805)927-3893 |               |
| Nancy Siepel 2             | (805)927-3893 |               |
| Management                 |               |               |
| Tom Murphey 2              | (805)927-3893 |               |
| Carl Benz 2                | (805)644-1767 | (805)493-2793 |
| Greg Sanders 1,2           | (805)644-1767 | (805)985-7593 |
| Steve Henry 1,2            | (805)644-1767 |               |
| Marie Lindsey 1,2          | (805)644-1767 |               |
| Toni Abajian 1,2           | (805)644-1767 |               |



Monterey Bay Aquarium - Research Dept

Marianne Riedman 2 (408)648-4977

Michelle Staedler 2 (408)648-4976 (408)688-0465

Alisa Giles 2 (408)648-4973 (408)464-2548

MBA husbandry staff will be involved with rehabilitation

Marine Mammal Center

Dawn Smith 2 (415)289-7349 (415)488-0728

Patty Chen-Valet 2 (415)289-7329 (415)333-2623

Cleaning - Oiled otters arriving at a cleaning facility will be placed in a quiet area, examined and possibly treated by the veterinarian(s) and/or animal health technicians (AHTs) on duty. Fresh water and/or fresh water ice and perhaps food will be made available during this period. (Ice usually would have also been available during transport). Only when a veterinarian on duty determines that the otter is stable will cleaning procedures be initiated. A variety of data sheets will accompany each otter through the cleaning and rehabilitation process. The importance of careful data collection can not be overemphasized.

Cleaning procedures, modified appropriately by site specific equipment availability, are as follows. Sea otters to be cleaned will be anesthetized using fentanyl and azaperone or similar drugs (or perhaps halothane gas) by an experienced veterinarian and placed on the washing table. Ideally, washing tables will be equipped with three or four well aerated nozzles dispensing temperature controlled (approximately 70o F), softened, fresh water. Washing will constitute a cyclic wash, rinse, wash, rinse etc., with a 1 to 16 dilution of Dawn dish washing detergent and water. Four to six people are required per washing table, one (with heavy gloves) specifically to hold the head-paws area. Depending on the degree of oiling, washing will take from 40 minutes to one hour. The oily wash water should be held in a container which may be examined by someone from the local waste water treatment plant. It is likely that the small quantity of oil present may be disposed of along with the rinse water. The first wash water will probably not amount to more than 25 gallons per otter and probably less. The total quantity of oil on even a heavily contaminated sea otter will be very small. Small quantities of petroleum residues are allowed in domestic sewage. Second and additional washes may, without question, be directed into the domestic sewer system. Each animal will then be rinsed for 40 minutes to one hour. Animals will then be towel dried and moved to a drying table. Ideally, each drying table will be serviced by three or four air hoses with nozzles which deliver high volume, dried, temperature controlled air. However, initially we will have only one or possibly two heavy duty pet dryers per facility. Following drying, each animal will be reversed from the anesthetic (or removed from halothane), placed in a large, slat-floor kennel with a sliding top (=intensive care cage) or other easy Vet/AHT access pen for intensive care monitoring). When fully recovered from anesthesia, and if its health state allows, each otter will be moved to one of the two- otter pen/pools (1 pool, 2 haul-outs) which will be serviced by abundant, clean, chlorine free salt water. As health and fur condition improve, otters may be moved to larger pools. All pools will have abundant haul-out space. It will generally take approximately seven to ten days for the fur to recover its water repellency.

Oily equipment (eg., cages and dip nets) should be wiped down thoroughly with oil sorbent pads then washed with detergent and water and disinfected with a chlorine solution. All oil contaminated solid waste must be treated as hazardous waste and disposed of properly.

Feeding - Food will be offered every two or three hours around the clock for animals in intensive care and four or five times a day for animals once they enter a two otter pool. Food will be prepared in each facility's existing food room closely coordinated by or with that facility's food room supervisor. (We will be working around

existing schedules). Food offered will amount to 10 to 15 pounds per day per otter and consist of recently thawed clams, shrimps, sea urchins, market crabs, fish fillets, mussels, abalones, squids etc. as available. The ink sack should be removed from each squid to prevent confusion in diagnosing enteritis. Exoskeletons and squid pens may have to be removed to prevent drain clogging. Uneaten food will be removed and discarded prior to each feeding to insure that spoiled food is not consumed. Notes on amount of food consumed, behavior and coat condition will be kept on each otter, and data sheets will be filled out at regular intervals.

Holding - Rehabilitated otters will be held in large pools and/or floating holding pens for the minimum time possible. As soon as the habitat has cleansed sufficiently they will be released.

Release - Release, if there is negligible danger of introducing disease into the wild population (based on opinions of Vet pathologists from EPA, the USFWS National Wildlife Health Research Center, AFIP, OSPR others?) and giving due consideration to possible quarantine protocols, will be as soon as possible (to minimize the disease potential) and as near the original capture site as practicable (to reduce dispersal and thereby increase survival).

Research - Research protocols should be in place to track appropriate portions of the capture and rehabilitation procedure. As new knowledge becomes available, procedures will be modified accordingly.

#### Site Specific Procedures - Monterey Bay Aquarium (MBA)

MBA is located at 886 Cannery Row, Monterey California which is adjacent the ocean on the east side of Monterey Peninsula at the Monterey-Pacific Grove border. Sea otters should be brought through the security controlled, locked gate near the intersection of Wave Street and Eardley Avenue and down to the corporation yard. Cages will be placed on the third floor in a quiet area or possibly in a mobile trailer on Hopkins Marine Station (HMS) property) for vet/AHT observation and stabilization. A wash table will be installed in the quarantine area. A quick connect for a water softener unit, which when activated will result in temperature controlled softened fresh water being delivered to the wash table via hose, has been installed in the quarantine area. Drying will be conducted in the Vet room, if that room is available, or in a mobile trailer on HMS property. The intensive care area will be on the third floor or in a mobile trailer. Five to eight two otter pool-pens will also be installed on the third floor. The larger holding pools will be used as available in the following order of preference: 1) Third floor, 2) HMS tank and 3) Quarantine tanks. The food room and the vet room are located inside the building on the first floor. If additional refrigerator space is needed, it will be brought in and placed near the food room. Ideally, additional personnel will all be aquarium volunteers, and therefore supportable by the existing volunteer support services, however, if necessary, additional trailer space will be provided on HMS property. Floating holding pens will be installed at PG&E-ML if needed (see PG&E Moss Landing below).

Long Marine Laboratory (LML) - LML is located on the western edge of Santa Cruz city. The address is 100 Shaffer Road. From Hwy 1 turn toward the ocean on Western Dr. Very quickly turn right on Mission St. then left on Natural Bridges Dr. Follow Natural Bridges Dr. to Delaware Ave. Turn right and follow Delaware Ave. to the entrance to LML property at Shaffer Rd. Follow this road (not Shaffer Rd.) which shortly turns to the left to the LML facilities. (The exact location of pre-established cleaning and rehabilitation equipment, and the emergency use of some of the existing space at LML is being worked out).

PG&E Moss Landing - The 70+ foot long dock at the entrance to the salt water intake structures for Pacific Gas and Electric Company's electric power plant, units 1 through 5, in Moss Landing Harbor, provides an excellent place to moor floating holding pens for sea otters. There is, also, ample shoreside space to assemble and launch floating pens. The entire area is fenced and the access road is controlled by a locked gate. Adequate space for mobile equipment for food storage and preparation as well as for a personnel trailer is also available.

All five existing 12 feet by 12 feet by 6 feet high floating pens may be tied directly to the existing dock. (For future expanded capability an emergency perpendicular dock could be installed, up to 100 feet plus in length, without closely approaching the main harbor channel). Observation blinds can easily be constructed using existing fencing, plywood and tarps.

The Marine Mammal Center (TMMC) - TMMC is located on the north side of the Golden Gate in the Golden Gate National Recreation Area (GGNRA). Incoming otters would almost certainly be arriving from the south. From Hwy 101 take the first off ramp after crossing the Golden Gate Bridge, which is Alexander Ave. Then turn left under the freeway and left again for about 1 block. Bear to the right on Conzelman Rd. Travel up hill then turn right on McCullough Rd. Travel down hill then turn left on Bunker Rd. Continue on Bunker Rd. then turn right at the sign reading The Marine Mammal Center. Follow this road to the TMMC entrance. (The exact location of pre-established cleaning and rehabilitation equipment, and the emergency use of some of the existing space is being worked out).

Horseshoe Bay - A great alternative or secondary site for mooring floating holding pens appears to exist at Horseshoe Bay, a few miles away from TMMC and still within GGNRA. The National Park Service responded favorably to an inquiry about using the area for sea otter rehabilitation. In a spill situation where Moss Landing was affected, Horseshoe Bay would become the preferred site. If sea otters were being rehabilitated at TMMC, then Horseshoe Bay might be used even if PG&E-ML was also being used. As a third alternative there is potential to moor floating pens adjacent the Romberg State Center for Environmental Studies property at Tiburon.

## B. MARINE MAMMAL CONTINGENCY PLAN (Preliminary Outline)

Background:

Training:

- Oil Recognition
- Capture
- Care and Rehabilitation

Capture and transport:

- Pinnipeds
- Cetaceans

Medical Care and Cleaning:

- Pinnipeds
- Cetaceans

Feeding:

Holding:

- Pinnipeds
- Cetaceans

Release:

Facilities:

C. Marine Bird Contingency Plan - (to be completed)

V. Natural Resource Damage Assessment:

Determining Injuries to Marine Wildlife - (to be completed)

Refer to the Natural Resource Damage Assessment (NRDA) Area Contingency Plan (SUCG Annex C, Appendix I, Tab D) for a discussion of wildlife NRDA within the Incident Command System.

VI. Permit Requirements and NMFS Guidelines for Oiled Wildlife  
Response Activities

(See tables: text to be completed)

PROTOCOL FOR DETERMINING PINNIPED OIL SPILL INVOLVEMENT

A. Live Animals

(In coordination with CDFG-OSPR and NMFS NRDA staff for Incident Commander.)

- 1) Determine if animal is a candidate for capture based on NMFS guidelines.
- 2) Capture may be initiated by a rehabilitation center under the guidance of CDFG-OSPR and NMFS NRDA staff.

B. Dead Animals

(In coordination with CDFG-OSPR and NMFS NRDA staff for Incident Commander, determine if carcass is fresh or decomposed.)

a. Fresh Carcass

- 1) Complete an NMFS stranding report.
- 2) Tag carcass with a field identification number.
- 3) Transfer carcass to a designated holding facility (freezer storage).
- 4) Perform necropsy.
- 5) Forward original stranding and necropsy report to NMFS.

b. Decomposed Carcass

- 1) Complete an NMFS stranding report.
- 2) Tag carcass with a field identification number and spray paint.
- 3) Contact responsible beach agency for disposal.

## NMFS GUIDELINES FOR RESCUING PINNIPEDS IMPACTED BY AN OIL SPILL

(To be implemented under the guidance of CDFG-OSPR and NMFS NRDA  
staff for the Incident Commander.)

(1) No rescue should be initiated on free-swimming or beached pinnipeds in the vicinity of an oil spill unless the animal in question is in obvious distress. A good rule-of-thumb to follow is, if the animal attempts to evade capture, leave it alone.

(2) No rescue attempt should be made of any pinnipeds hauled out on a mainland or offshore island rookery site, or hauled out on a breakwater, barge, or bell buoy. The primary goal at these sites should be to boom off the immediate area, thereby creating a buffer zone around the site.

(3) No hazing of pinnipeds should occur unless authorized by the Incident Commander.

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### **TAB O VOLUNTEERS**

#### Introduction

Volunteers can and have made significant contributions in assisting with oil spill containment and cleanup activities. However, their use has been limited as they often have little or no training in the mechanisms of oil spill containment and cleanup, or knowledge of health and safety requirements. Without appropriate training and direction, volunteers can present a hazard to themselves and others, as well as to the environment and



wildlife which they wish to save.

Volunteers can usually be characterized as belonging to one of two categories: a) professional volunteers, or b) convergent volunteers. Professional volunteers may be individuals, members of organized groups or professional associations, who have been trained to perform specific tasks and functions related to oil spill containment and cleanup efforts. Convergent volunteers are usually individuals from the general public who spontaneously appear to participate in the cleanup effort following an oil spill, but have not received any training in oil spill containment or cleanup.

There are a number of onshore coordination and support activities that have a low magnitude of risk which could be successfully assigned to trained volunteers. These tasks are detailed later in this document. In any case, trained volunteers should be used to the extent of safety limitations and according to their level of training. A list of the names, phone numbers and training qualifications of volunteers needs to be maintained and updated periodically if such a workforce is to be effectively recalled and managed during a spill crisis. Likewise, procedures for the on-site training and a list of qualified instructors for convergent volunteers need to be detailed and arranged for prior to an oil spill to ensure successful on-site management.

Human health and safety is the first priority in decisions regarding the use of volunteers at an oil spill event. Response actions under this contingency plan will comply with the provisions of Title 8, California Code of Regulations, Section 5192, Hazardous Waste Operations and Emergency Response (HAZWOPER) as identified in Annex H.

The responsible parties (RPs) may utilize volunteers in accordance with their oil spill contingency plan procedures, or volunteers may be employed as unpaid state workers for the purpose of workers' compensation by the Administrator of the Office of Oil Spill Prevention and Response (OSPR). Ultimately, the use and control of volunteers at a response site is the responsibility of the unified command or Incident Commander.

In order to facilitate a consistent, statewide approach to volunteer coordination and management all local governments and potential RPs should address the following areas in their plans for the utilization of volunteer resources:

#### A. Volunteer Resource Management Responsibilities

The Volunteer Unit within the Logistics Section of the unified command system as described in Annex B, Appendix II has primary responsibility for coordinating volunteer resources. The Volunteer Unit includes federal, state, and local government coordinators.

The Area Committee Volunteer Management subcommittees shall have responsibility for the following:

1. Identify local environmental and special interest groups and collect information on the organizations' abilities to provide support or assist in the mobilization of trained volunteers.
2. Identify a local coordinator to the Volunteer Unit of the unified command system.
3. Identify potential sites for volunteer reception centers and develop procedures for activating and equipping the sites.
4. Prepare volunteer guidelines and procedures for managing and utilizing volunteer resources.

## B. Organized Volunteer Resources Database

Existing Volunteer Resources are identified in Annex F, Appendix III, Tab R. This resource listing must be kept current within each geographical area in order to effectively initiate the mobilization of volunteer organizations and resources.

This information should be kept current within the local governments contingency plans. The volunteer organization profiles also will be forwarded to both the OSPR and Area Committee chairperson. OSPR will maintain the information in a statewide database for inclusion in the State Plan. The Area Committee chairperson will use the information to update the Area Plan. The information collected should include:

- . Description of the Organization
- . Oil Spill Response Capabilities
- . Response and Mobilization Capabilities
- . Training History and Capabilities
- . Description of Special Resources and Equipment

## C. Identification of Potential Volunteer Activities

Local governments and potential RPs should specifically identify jobs and roles for which trained volunteers will be used, and for which convergent volunteers can be trained and used. The duties and responsibilities should be developed for each job, including listing any minimum qualifications or special skills desired. Other information relating to mandatory training requirements, operation of special equipment, protective clothing, physical working location, etc., should also be identified for each position as well.

A list of possible volunteer roles and activities is shown below. The list is not all inclusive and may be expanded or altered according to the type of volunteers available in a particular area:

### POTENTIAL VOLUNTEER ACTIVITIES

1. Volunteer Onshore Response Activities
  - a) Shoreline Cleanup (Pre-spill)
  - b) Beach Patrol
  - c) Crowd Control
  - d) Oil Spotters
  - e) Oiled Wildlife Spotters
  - f) Water Sampling
  - g) Vessel Owner ID and Notification
  - h) Shoreline Cleanup (Post-spill Debris Removal)
2. Volunteer Coordination and Management Activities
  - a) Volunteer Liaison to:
    - . State/Federal Volunteer Program Coordinators
    - . Wildlife Rehabilitation Program Coordinators
    - . Public Information Officers
    - . On-Scene Logistics Support
    - . Planning and Financial Support



- . Local Community and Volunteer Organizations
  - b) Volunteer Intake Site Setup
  - c) Registration and Skills Bank
  - d) Orientation and Education
  - e) Interviewing and Screening
  - f) Assignment and Placement
  - g) On-site Training of Convergent Volunteers
  - h) Timekeeping
  - i) Recordkeeping
  - j) Ground Transportation
  - k) Parking and Traffic
  - l) Volunteer Site Logistics
  - m) Debriefing and Exit Processing
  - n) Post-incident Recognition of Volunteers
3. Volunteer Administrative and Logistic Support Activities
- a) Public Information and Awareness
  - b) Volunteer Center Communications Operations
  - c) Data Processing and Programming
  - d) Messengers and Runners
  - e) Drivers and Equipment Operators
  - f) Supply Acquisition
  - g) Donated Resources Control
  - h) Skilled and General Clerical Support
  - i) Skilled and General Laborers
  - j) Vehicle Maintenance and Repairs
  - k) Janitorial Services

In developing these duties, however, note that volunteers, in general, should not be used for physical removal or remedial activities unless specifically requested by the incident commander.

#### D. State Training Program Requirements

State and federal health and safety agency regulations clearly stipulate that all persons working with hazardous materials, including crude oil, must receive specific health and safety training. It is not likely that volunteers, especially convergent volunteers, will be utilized to work directly in the recovery of oil. In any case, all volunteers (professional or convergent) will be kept at chemical levels known not to cause injury or harm.

However, the State of California does require training for all on-site volunteers no matter what their occupation or assignment. This training is 4 hours long for convergent volunteers, and 24 hours minimum for long term, pretrained volunteers. Detailed training requirements are found in Annex H. It is important that the curriculum for this training and state and local training resources be identified in the volunteer management plan.

The state is developing a Scope of Work that defines what is a qualified instructor for teaching the required health and safety classes mentioned above. A statewide database is maintained which identifies approved individuals trained under the approved curriculum. The volunteer management plan must identify a procedure

to facilitate participation in this system.

The state is actively budgeting money for statewide training grants. These funds are available to any local emergency plan holder once their plan is approved by the state, and will be used to provide training to local city, county and state government personnel, as well as local professional organized volunteer groups involved in oil spill response efforts. Local government volunteer management plans should identify their level of participation, including the number of persons to be trained, affiliation, and available training facilities and instructors.

All volunteers requesting access to the oil spill site will have to demonstrate proper health and safety training prior to being given permission to enter.

#### E. Procedures for Utilizing Volunteers

The volunteer management plans should include implementing procedures for the following activities:

##### 1. Volunteer Reception Centers

- a) Identify and select volunteer reception centers (away from spill site). Select sites based on the following criteria:
  - . Accessibility to main roads, freeways
  - . Central location; site familiar to locals
  - . Parking and restroom facilities
  - . Meeting/conference rooms
  - . Availability of food and water
  - . Primary usage that may affect availability during event (i.e. Sunday church services; classrooms in daily use)
- b) Identify procedures to secure phones and radio communications. (To be coordinated with the Logistics section of the unified command).
  - 1) Set up phone numbers for inquiries concerning the need for volunteers, including toll free number if deemed appropriate. Develop phone procedures.
  - 2) Coordinate with the Public Affairs staff of the unified command to notify media of number to call for volunteer information.
- c) Identify and secure other equipment, materials and supplies as needed. (To be coordinate with Logistics section of the unified command).
- d) Identify/contact local organized volunteer groups who are able to provide services and staff, if required or deemed appropriate.

##### 2. Volunteer Intake and Registration Processing

- a) Require all potential volunteers to register, using a standardized Volunteer Registration Card. (This form and other intake documents are being developed by the Volunteer Ad Hoc Group).

- b) Inform/educate potential volunteers on the status and nature of spill hazards, health and safety issues and mandatory training requirements.
- c) Identify job opportunities, duties and responsibilities, placement issues, supervision, work schedules, and special on-site training needs. Prepare procedures/checklists for volunteer intake and orientation.
- d) Identify special bird and animal rescue/rehabilitation training requirements. Refer potential volunteers to established organized volunteer wildlife rescue and rehabilitations group representatives. Refer trained, certified wildlife rescue volunteers to on-site Volunteer Wildlife Program Coordinator.

### 3. On-Site Training and Verification

- a) Identify and equip training area within or near the Volunteer Reception Center to accommodate convergent volunteers. Develop site activation checklist.
- b) Establish a training schedule and identify competent qualified instructors (as defined by the OSPR Scope of Work).
- c) Process training documentation; include procedures to verify existing training credentials.

A Volunteer Management Guideline is being prepared by the state Ad Hoc Volunteer Planning group. This document will include standardized forms, uniform procedures, and educational/ informational materials to assist local governments and potential RPs in developing the volunteer component of the Area Contingency Plan.

The Office of Oil spill Prevention and Response (OSPR) will utilize a Volunteer Coordinator to facilitate the organization and implementation of a volunteer program within the OSPR. This is a dedicated staff position which will participate in both administrative and spill response activities. All questions, requests and issues relating to volunteers are to be referred to OSPR's Volunteer Coordinator as the primary point of contact.

In addition to hiring a Volunteer Coordinator, the OSPR also has signed a contract with the County of Santa Cruz (CSC) finalizing an agreement for fiscal year 94/95 to establish a field volunteer administrative program. This is a pilot effort leading to the development of a consistent statewide program for professional and convergent volunteers, specifically trained for oil spill response.

Under this agreement, the CSC and its subcontractor, Friends of the Sea Otter, will recruit, interview, and train a corps of volunteers that will be able to respond immediately to an oil spill in the central coast planning area. Plans will be prepared for the establishment and staffing of a Volunteer Reception Center which will be integrated into the Incident Command System during spill incidents, as well as drills and exercises.

Other services to be provided are the development and maintenance of a computer database for volunteer management and communication. This database will contain all personnel data, such as job classification duty statements, State employment forms, training records, including the lever of HAZWOPER (Hazardous Waste Operations and Emergency Response) and other training required or attained for each volunteer. It also will include expiration dates for each training and any special expertise possessed by individual volunteers. Pre-trained volunteers will assist in information dissemination, coordinated through periodic newsletters and workshops.

Santa Cruz County, in conjunction with the OSPR, will develop the CSC volunteer coordination element for the county contingency plan within the U.S. Coast guard area planning process and make recommendations to OSPR to standardize similar initiatives for other areas of the California coast.

# Memorandums of Understanding/Agreement

## Annex K

|                                                                                                                                                                                                                                                                                                           |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Memorandum of Agreement on Oil Spill Prevention and Response Between the COMMANDER, ELEVENTH COAST GUARD DISTRICT and THE STATE OF CALIFORNIA .....                                                                                                                                                       | 2  |
| Waiver of waste discharge requirements for incidental discharge associated with oil spill response activities .....                                                                                                                                                                                       | 19 |
| Memorandum of Understanding Between the DEPARTMENT OF FISH AND GAME'S OFFICE OF OIL SPILL PREVENTION AND RESPONSE and the STATE WATER RESOURCES CONTROL BOARD Relating to Discharges Associated with Oil Spill Response Activities Conducted Pursuant to CH. 7.4, Division 1 of the Government Code ..... | 21 |
| Memorandum of Understanding Between the DEPARTMENT OF FISH AND GAME'S OFFICE OF OIL SPILL PREVENTION AND RESPONSE and the STATE LANDS COMMISSION .....                                                                                                                                                    | 26 |
| Copy of the MOU between the Department of Fish and Game (DFG) and the California Department of Forestry and Fire Protection (CDF). ....                                                                                                                                                                   | 28 |
| Memorandum of Understanding Between CALIFORNIA DEPARTMENT OF FISH AND GAME and CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION .....                                                                                                                                                                | 29 |
| Memorandum of Agreement on Oil Spill Prevention and Response Between WILDLIFE PROTECTION DIVISION and OFFICE OF OIL SPILL PREVENTION AND RESPONSE .....                                                                                                                                                   | 32 |
| Memorandum of Agreement Between the U.S. Coast Guard Captain of the Port San Diego and the Commander, Naval Base San Diego for Cooperation in Oil Spill Prevention and Response ...                                                                                                                       | 35 |
| AGREEMENT Concerning Response and Clean Up of Petroleum Products made by and between the UNITED STATES COAST GUARD MARINE SAFETY OFFICE SAN DIEGO, and the COMMANDER, NAVAL BASE, SAN DIEGO. This Agreement pertains to the coastal and inland waterways within the County of San Diego .....             | 40 |
| THIS AGREEMENT is made by and between the UNITED STATES COAST GUARD MARINE SAFETY OFFICE SAN DIEGO, and the COUNTY OF SAN DIEGO HAZARDOUS INCIDENT RESPONSE TEAM POLICY COMMITTEE. This Agreement pertains to the coastal and inland waterways within the County of San Diego .....                       | 42 |

MEMORANDUM OF AGREEMENT  
ON  
OIL POLLUTION PREVENTION AND RESPONSE  
BETWEEN  
THE COMMANDER, ELEVENTH COAST GUARD DISTRICT  
AND  
THE STATE OF CALIFORNIA

WHEREAS, Congress enacted the Oil Pollution Act of 1990 (OPA 90) to protect the waters of the United States from oil pollution and to plan for the effective and immediate response in the event of an oil spill, and the President subsequently designated the Coast Guard as the Federal On Scene Coordinator (OSC) within the California coastal zone; and

WHEREAS, Congress has decided in a number of enactments, including OPA 90, not to preempt the various States from regulating certain matters associated with the protection of waters within their Jurisdiction from oil pollution, which matters are also subject to regulation by the Coast Guard under OPA 90 and other statutes; and

WHEREAS, Congress explicitly provided that the provisions of OPA 90 do not: (1) preempt or affect the authority of any state to impose additional liability or requirements respecting oil discharges or other oil pollution within such a state or removal activities in connection with such a discharge; (2) affect the authority of any state to establish or continue a fund any purpose of which is to pay for oil pollution or the substantial threat of oil pollution costs or damages, or to require any person to contribute to such a fund; or (3) affect the authority of any state to impose any fine or penalty for violation of law relating to a discharge; and

WHEREAS, the State of California has enacted the Lempert-Keene Seastrand Oil Spill Prevention and Response Act of 1990, herein

after referred to as the California Act, to protect the waters of the State from oil pollution and to plan for the effective and immediate response, removal, abatement, and cleanup in the event of an oil spill and to augment State authority for the prevention and response to spills in waters under the jurisdiction of the State; and

WHEREAS, the California Act provides that the Administrator of the Office of Oil Spill Prevention and Response (OSPR) is appointed by and acts at the direction of the Governor. The Administrator acts as chairperson of the State Interagency Oil Spill Committee (SIOSC) and coordinates actions through the State committee and review subcommittee.

WHEREAS, the Administrator, subject to the Governor, has the primary State authority to direct prevention, removal, abatement, response containment and cleanup efforts, with regard to all aspects of any oil spill in the marine waters of the State, in accordance with any applicable marine facility or vessel contingency plan, and the State Marine Oil Spill Contingency Plan; and

WHEREAS, the State Lands Commission has the primary State authority to adopt rules, regulations, guidelines and commission leasing policies for reviewing the location, type, character, performance standards, size, and operation of all marine facilities on lands leased from the Commission and all existing and proposed marine terminals within the State; and

WHEREAS, the Commander, Eleventh Coast Guard District is the senior Coast Guard officer within the State of California, exercising Federal authority under the Oil Pollution Act of 1990 and other Federal laws with respect to oil pollution planning and response in waters subject to the jurisdiction of the United States in and outside the State of California and matters dealing with areas of vessel manning and safety equipage; and

WHEREAS, marine oil spills require a rapid, efficient, and coordinated response and cleanup by Federal, State, and local agencies as well as from private entities to minimize the deleterious effects on human, wildlife, and other natural resources; and

WHEREAS, both the Coast Guard and the State recognize the critical roles each has within their respective areas of authority in preventing oil spills and in planning for and responding to oil spills; and

WHEREAS, the Parties recognize the cooperation between them in the implementation and exercise of their respective statutory and regulatory authority is essential to avoid conflict and unnecessary duplication; and

WHEREAS, the Parties believe and intend that by acting in a cooperative and coordinated manner, the effect will be a synergistically enhanced oil spill prevention and response effort in the State of California;

NOW THEREFORE, the Parties agree, to the extent permitted by law, and as consistent with their respective policies and available resources, to cooperate and to coordinate their efforts in implementing and exercising their respective statutory and regulatory duties related to oil spill prevention and response.

## I

### PARTIES

The Parties to this Memorandum of Agreement are the Eleventh Coast Guard District (“Coast Guard”) and the State of California (“State”).

## II

### PURPOSE OF THE AGREEMENT

The purpose of this Memorandum of Agreement (MOA) is to ensure the Parties exercise their respective authorities regarding oil spill prevention, planning, and response in a manner so as to avoid unnecessary duplication and conflict and to **ensure best achievable protection** from the impact of pollution



incidents for the navigable waters of the United States which are within or may impact the marine waters of the State of California; subject to each Party's statutory, regulatory, and policy requirements.

### III

#### DEFINITIONS

Except where otherwise specifically defined in the context of its use herein, or where specifically set forth below, terms used in this Memorandum of Agreement (MOA) shall have the meaning as set forth in Federal law and applicable State law.

##### A. Specific definitions:

1. State Waters: Federal regulations designate the Coast Guard as the Federal On Scene Coordinator (OSC) within the California coastal zone. The Environmental Protection Agency (EPA) is the OSC for oil spills within the inland zone. The jurisdictional boundary between these zones is specified in the Federal Region IX Regional Response Team Contingency Plan. The term "State waters" shall mean those navigable waters of the United States which lie within the jurisdiction of the State of California and over which the Coast Guard has concurrent Federal **authority for oil spill** response.

### IV

#### INFORMATION SHARING

The exchange of information between Federal government and the State relative to historic pollution events and current risks is necessary to develop appropriate prevention and response systems. Both Parties maintain information systems that are relevant to both historical and real-time incidents. The Parties require the fullest degree of information sharing from available and pertinent data bases in order to make accurate and timely decisions to prevent and or respond to oil pollution. Transmissions of information shall be in accordance with procedures adopted by the Parties for that purpose.

##### A. Action:

1. The Parties agree, subject to limitations imposed by applicable law and regulation, to share information from relevant studies.
2. The Eleventh Coast Guard District will advise the State of information it receives of the following events occurring in the navigable waters, or that may impact the State, involving tank vessels: disablings; collisions; groundings; explosions; ramming; allisions; distressed vessels and other events when oil pollution or substantial threat of oil pollution results. The State will ensure that its emergency notification systems report these incidents to the Coast Guard.
3. The Parties agree to identify and share existing data bases, including the Marine Safety Information System (MSIS), and work toward developing risk management programs that provide risk data sharing for vessels and access by both parties to all data, subject to the requirements of applicable law, regulations, and policy, in a manner to conserve and leverage agency resources.



## OIL SPILL RESPONSE PREPAREDNESS

The National Contingency Plan (NCP) establishes the response organization within the United States and requires tiered contingency planning efforts. The State, consistent with the NCP, defines its response organization through the State Hazardous Material Plan and addenda to the Oil Spill Contingency Plan.

### A. Planning Documents

#### 1. National Oil and Hazardous Substances Pollution Contingency Plan (“National Contingency Plan - NCP”):

The Environmental Protection Agency (EPA) is the lead agency in drafting and the Coast Guard and EPA are jointly responsible for implementing the NCP which governs actions concerning spill response and cleanup for Federal, State, local agencies, responsible parties, clean-up contractors and others participating in such actions in United States waters.

- a. Action: The State will work with the Coast Guard to ensure State plans and policies for marine environmental protection are consistent with the NCP.

#### 2. The State Hazardous Material Incident Contingency Plan and the State Oil Spill Contingency Plan:

The State Office of Emergency Services (OES) is responsible for developing and maintaining the Statewide Contingency Plan that details State responsibilities, policies, and actions governing response to spills in waters of the State. The OSPR has specific statutory authority and responsibility concerning marine oil spills.

- a. Action: The Coast Guard will consult with the State to ensure State plans and policies for marine environmental protection are consistent with the NCP.

#### 3. Area Contingency Plan:

The Area Committees, established by the President under the authority of the Oil Pollution Act of 1990, are responsible for the development of Area Contingency Plans for those Areas under the direction of the Federal On Scene Coordinator (OSC). The Area Contingency Plans describe the responsibilities of owners, operators and Federal, State and local agencies in responding to oil spills or threats of spills, list equipment and personnel available to respond, describe procedures for the use of dispersants and describe how the Area Contingency Plan integrates with other plans.

Area Contingency Plans are adopted by amendments to the State Contingency Plan to facilitate and coordinate on-going work with local municipalities and coastal counties. Through the OSPR Local Grant Program, municipal and county governments are also included in State and Federal planning documents. The objective is to create consistency between the local, State, and national contingency plans.

- a. Action: The Parties agree to consult with each other to enhance contingency planning and to

ensure that the Area Contingency Plans and Statewide Master Plan are consonant and uniform, subject to the requirements of existing law.

#### 4. Facility Oil Spill Response Plans:

Facility Oil Spill Response Plans are required by both Federal and State law. These plans describe facility capabilities to prevent and respond to pollution emergencies. The State and the Coast Guard will coordinate with the Department of Transportation (DOT), Minerals Management Service (MMS), and the Environmental Protection Agency (EPA) in assessing facility contingency plans.

##### a. Action:

(i) Subject to the requirements of applicable law, regulations and policy, the Parties will develop a system to coordinate, to the extent practicable, the Parties' cooperative review and approval of facility contingency plans. The Parties agree to endeavor to conduct reviews of facility contingency plans in as much of a coordinated and non-duplicative manner as is permitted by applicable laws, regulations and procedures.

(i) The Coast Guard and the State will cooperate to ensure that requirements for facility response plans are compatible and do not conflict. The Parties will work together to determine the feasibility of the Coast Guard accepting State review of facility contingency plans, subject to Coast Guard oversight.

#### 5. Vessel Oil Spill Response Plans:

Vessel oil spill response plans are required by both Federal and State law. These plans describe vessel capabilities to prevent and respond to pollution emergencies.

##### a. Action:

(i) Although the Parties recognize the need to independently review vessel plans for compliance with their respective laws and regulations, the Parties agree to endeavor to conduct reviews of vessel contingency plans in as much of a coordinated and non-duplicative manner as is permitted by applicable laws, regulations and procedures.

(ii) The State shall accept to the maximum extent practicable the Federal-vessel contingency plan requirements and shall prepare supplementary forms for parties to comply with State requirements in areas such as preventive measures which are in addition to Federal requirements.

(iii) The Parties will cooperate to ensure that requirements for vessel contingency plans are compatible and do not conflict. The Parties will work together to determine the feasibility of the Coast Guard accepting State review of vessel contingency plans, subject to Coast Guard oversight.

#### B. Government Committees

The National Contingency Plan (NCP) directs the organization of government committees to prevent

and respond to pollution emergencies.

1. Regional Response Team:

The Region IX - Regional Response Team (RRT) is established as a coordinating committee by the NCP and includes the State along with the Federal agencies with pollution prevention and pollution response responsibilities.

a. Action: The Parties agree to jointly participate as members of the Regional Response Team (RRT). RRT participation includes both attending regularly scheduled meetings and responding during incident specific RRT mobilization.

2. Area Committees:

Area Committees were established by OPA 90 to maximize State and local participation in contingency planning.

a. Action: The Parties agree to coordinate local response planning by jointly participating in the Area Committee planning process. Both Parties are strongly committed to participating in Area Committee Plan development and the use of the Area Committees in conducting exercises and drills, consistent with the provisions of the NCP and applicable State contingency plan.

3. MEXUSPAC Joint Response Regional Team:

The MEXUSPAC Joint Response Regional Team (JRRT) is established in accordance with the NCP to prepare for and respond to pollution emergencies that may impact the international border area between the United States and Mexico on the Pacific coast.

a. Action: The Coast Guard will to keep the State informed of all agreements, plans, and standard operating procedures (SOP) developed to coordinate pollution response with Mexico. During an incident specific mobilization of the MEXUSPAC JRRT, the State will be represented through the State RRT representative who will be either from the Department of Fish and Game or OSPR.

4. State Interagency Oil Spill Committee (SIOSC): SIOSC is responsible for coordinating oil spill prevention, response, planning and policy at the State level.

a. Action: The Coast Guard is invited to provide input and recommendations to the SIOSC.

5. State Harbor Safety Committees: State Harbor Safety Committees are responsible to evaluate and recommend ways to improve the safety of navigation in harbors and harbor approaches.

a. Action: The Coast Guard is invited to provide input and recommendations to the Harbor Safety Committees.

b. The State shall accept to the maximum extent practicable the Federal compliance documents for Federal certification and shall prepare supplementary forms for compliance with State regulations.

### C. Drills and Exercises:

Drills and exercises are required by both Parties to ensure the readiness and interoperability of pollution response organizations. It is the intention of the Parties to encourage coordination, participation, and cross-training in periodic drills and exercises to facilitate a better understanding of each Party's duties and responsibilities as well as to ensure a combined, effective, familiar working relationship at oil spill incidents. The State encourages the participation of the Coast Guard in conducting or approving local firefighting training for shipboard fires.

#### a. Action:

(i) The Parties agree to interact in the planning, scheduling, design, conduct and evaluation of exercises as time and resources permit. In this context, the Parties recognize the role that the National Strike Force Coordination Center, as the focal point for exercise strategy for all elements of the National Response System, will schedule, design, execute, evaluate and provide feedback on all National Response System exercises in conjunction with the appropriate RRT and Area Committees.

(ii) The Parties agree to make available, as time and resources permit, any published annual reports as required by OPA 90 and State statutes concerning evaluations of drills and recommended changes to the National and Area Contingency Plans.

### D. Certification of Oil Spill Response Organizations:

Both Parties evaluate, categorize, and certify oil spill response organizations.

#### 1. Action:

a. The Coast Guard and the State will cooperate to the maximum extent practicable to evaluate, categorize, and certify oil spill response organizations. The Parties will develop joint certification guidelines and conduct independent or joint reviews as necessary or desirable.

## PREVENTION OF OIL SPILLS

### A. Cooperative Implementation:

The Parties are coordinating their efforts to prevent oil spills in the marine environment.

#### 1. Action:

a. To the extent permitted under applicable laws, the **Parties agree to cooperate in the** execution of their respective regulatory responsibilities, to minimize duplication of effort, and seek **to identify opportunities** for innovative implementation of casualty prevention plans. Both Parties recognize the importance of encouraging cross-training in each other's regulations and rules including the areas of inspection and response. Each Party must exercise its own rulemaking implementation responsibilities independently and in accordance with applicable rulemaking

procedures. Federal inspection requirements associated with vessel safety are not subject to supplemental State regulation.

## B. Vessel Inspections:

Each Party recognizes that the other must independently exercise its respective examination responsibilities in accordance with applicable law, regulations and policies. The Coast Guard conducts inspection programs for the purpose of enforcing both international agreements and domestic law aboard United States and foreign flagged vessels. The State, under the California Act, is required to evaluate that inspection process and make recommendations for improvement.

### 1. Action:

- a. The Parties agree to work together to avoid inconsistent requirements and to find ways to conduct vessel inspections in such a way that disruption to the industry is minimized and efficiency and safety maximized.
- b. In implementing any State examination programs, the State agrees to avoid conflicts and unnecessary duplication in reviewing Federal inspection programs by on-going consultation with the **Coast Guard**.
- c. Review of inspection records: The Parties each agree to **make inspection** records available to the other and to cooperatively review inspection results, subject to applicable laws, regulations, and procedures.
- d. The State shall report to the responsible of, officer in charge, marine inspection (OCMI) recognized discrepancies in meeting the requirements of international agreements believed to exist aboard United States and foreign flagged vessels.
- e. Requirements in State Waters: The Parties will cooperate to establish consistent pollution prevention requirements, and to cooperatively monitor, examine and exchange information relative to those requirements, for vessels to operate in State waters.
- f. The State will promptly inform the cognizant OCMI and the Coast Guard will promptly inform the Administrator or his designee of any situation or circumstance relative to a vessel whose **condition or equipment** may significantly increase the potential for an unauthorized discharge or create an unusual or an unacceptable risk to public health and safety, or the safety of navigation within State waters.
- g. Both parties agree to share all applicable information obtained from their respective vessel inspections and examinations.

## C. Vessel Screening:

The Coast Guard, under Federal law, through the District Commander and the Captain of the Port (COTP), has the authority to regulate the entry of vessels, including those determined to be a threat to the environment. The State may establish the means by which it can determine whether tank vessels entering the waters of the State pose a substantial risk of harm to the public health and safety and the

environment.

1. Action:

- a. When the State determines that a particular vessel or vessels pose a substantial risk, that determination will be forwarded to the cognizant Captain of the Port (COTP). The COTP shall consider that information in making a determination under Federal law as to appropriate action to be taken, if any, including the possibility of denial of entry.

D. Tank Vessel Equipment:

The **Coast Guard conducts** inspections and examinations to ensure compliance with requirements for equipment to ensure safety of life at sea aboard vessels. The California Act authorizes the Administrator to conduct vessel inspections. Both Parties conduct examinations to ensure compliance with requirements for pollution prevention and pollution response equipment.

1. Action: The Parties will cooperatively examine pollution prevention and pollution response equipment aboard vessels and report noncompliance to the other Party.

E. Tank Vessel Manning:

The Coast Guard establishes and enforces requirements for manning, competence, and documentation of personnel aboard vessels.

1. Action:

- a. The State will assist the Coast Guard to evaluate and coordinate additional requirements for manning, *training*, and qualification requirements through the *manning* standards process.
- b. The Parties agree to actively promote and coordinate research projects to identify human factors which need to be regulated to prevent pollution incidents.

F. Tank Vessel Transfer Operations:

Monitoring tank vessel transfer operations has been identified as an effective pollution prevention action.

1. Action:

- a. The Parties will cooperate to monitor transfer operations aboard tank vessels, including, but not limited to, dockside transfers at facilities, and lightering and bunkering operations. The Coast Guard acting through the Marine Safety Offices (MSO's) and the State agree to cooperate in the scheduling of monitoring vessel transfer operations to make best use of limited resources and avoid redundant oversight and disruptions to industry. Each party will advise the other of violations observed.
- b. The Parties will cooperatively monitor and examine pollution prevention and pollution response equipment during transfer operations. Each party will advise the other of violations observed.

- c. The Parties agree to make transfer monitor records jointly available and to cooperatively review monitoring results, subject to applicable laws, regulations and procedures.
- d. MARPOL Reception Facilities: The Parties will work together to ensure adequate facilities are present to receive garbage, sewage, and oily wastes from vessels.
- e. The State will promptly inform the COTP and the USCG will promptly inform the State of any situation or circumstance relative to facilities whose operation or equipment may significantly increase the potential for an unauthorized discharge or create an unusual or an unacceptable risk to public health and safety, or the safety of navigation within State waters.

G. MARPOL 73/78: International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol or 1978 relating thereto:

MARPOL 73/78 is an international agreement implemented to reduce pollution from vessels.

1. Action:

- a. The Parties will cooperate in the enforcement of existing MARPOL requirements. The Coast Guard will keep the State informed concerning MARPOL regulations and both Parties will work together to develop disposal services adequate to support port operations.

H. Facility Inspections:.

Facility inspections are conducted by both Parties to ensure compliance with pollution prevention and pollution response regulations. The State has statutory responsibility for oil transfer facilities and their operation within the State. Included in this responsibility is the requirement to establish regulation and inspection programs governing oil transfer facilities. This includes regulation and inspection of oil transfer operations between marine facilities and tank vessels.

1. Action:

- a. Facility Inspection: The Parties will coordinate their respective inspection and monitoring activities to the extent practicable to utilize the resources of both Parties efficiently and effectively. Cognizant inspectors from both Parties may carry out inspections and other activities jointly where appropriate.
- b. Equipment: The Parties will cooperatively enforce requirements for pollution prevention and pollution response equipment at marine facilities.
- c. Manning: The Parties will cooperatively enforce requirements for trained and qualified personnel to be responsible for transfer operations at marine facilities.

I. Waterways Management:

1. Port and Waterways Safety

The Captain of the Port (COTP) is the predesignated Federal official with primary responsibility to exercise control of vessels to ensure the safety and security of ports and waterways. Under the California Act, Harbor Safety Committees are created and are responsible for the planning of safe navigation



and operation of tankers, barges, and other vessels in harbors and harbor approaches.

a. Action:

(i) The State will promptly inform the COTP and the Coast Guard will promptly inform the appropriate State authority of any situation or circumstance relative to vessels whose operation or equipment may significantly increase the potential for an unauthorized discharge or create an unusual or an unacceptable risk to public health and safety, or the safety of navigation within State waters.

(ii) The State is guided by recommendations from the Harbor Safety Committee for the planning of safe navigation and operation of tankers, barges and other vessels within each harbor. The State, in adopting regulations to implement the Harbor Safety Plan will coordinate with the COTP.

2. Vessel Traffic Services (VTS)

The Ports and Waterways Safety Act authorizes the Coast Guard to construct, operate and maintain vessel traffic services in the areas subject to the jurisdiction of the United States. The Federal system of VTS is designed and empowered to inform, advise, and direct marine traffic in designated areas. Federal VTSs require the participation of certain classes of vessels and may direct the movement of those vessels to reduce navigational risks.

In 1991, the Coast Guard completed a VTS Ports Needs Study to determine which United States ports would gain the most benefit from the presence of a Federal VTS. The California ports and waterways included in the Port Needs Study were

Los Angeles/Long Beach, Santa Barbara Channel and the ports in and around San Francisco Bay. The Coast Guard has subsequently formulated a VTS 2000 plan to implement the results of the Ports Needs Study.

a. There is funding and an implementation plan to upgrade the VTS in the San Francisco Bay. The scheduled completion date is early 1994.

b. A VTS for Los Angeles/Long Beach is included in the VTS 2000 plan and in future Coast Guard budget projections. A later phase of this plan, still subject to appropriation, will include the Santa Barbara Channel.

c. Pursuant to the California Act, the State is required to evaluate the status of VTS in California. The recommendations of the State's evaluation is to have fully operational Federal VTSs in Los Angeles/Long Beach, Santa Barbara Channel, San Francisco Bay, and other areas where appropriate.

d. State law authorizes the Los Angeles/Long Beach Marine Exchange to establish an interim system in the Los Angeles/Long Beach Harbors.

e. Action:

(i) State will cooperate with the Coast Guard to expand the existing VTS system with San



Francisco Bay and to implement new systems in Los Angeles/Long Beach and the Santa Barbara Channel.

(ii) The State desires to establish an interim system in the Los Angeles/Long Beach Harbor pending implementation of a Federal VTS. The Coast Guard will cooperate by sharing information on VTS systems. When the Federal VTS is operational, the Coast Guard and the State will facilitate exchange of information relating to vessel movement. The State and the Coast Guard will work toward a smooth transition from the interim Traffic Advisory System to a Federal VTS.

### 3. Pilots

Federal law may require pilots aboard vessels sailing within the coastwise trade. Foreign vessels or United States vessels sailing on their registry endorsement or their certificate of documentation may be controlled by State pilotage requirements. In the absence of State pilot

age regulations, the Federal government may impose pilotage requirements.

a. **Action: The Coast Guard** will regulate Federal pilotage **where required**. **The State** agrees to evaluate areas for State pilotage and to enforce those pilot requirements, subject to applicable State statutes, regulations, and policy.

### 4. Tug Escorts

Federal and State law authorize the regulation of the use of tug escorts and may require either equipment or standards of performance deemed necessary for the function.

a. Action:

(i) The State and the Coast Guard agree to consult with each other in issuing any regulations requiring tug escorts to ensure that they are consistent.

(ii) Towing Equipment: The Parties agree to review requirements for tow equipment for barges and tank vessels carrying oil in bulk with the purpose of determining whether additional standards for equipment, maintenance, operation, and inspection should be adopted.

### 5. Aids to Navigation (ATON)

The Coast Guard establishes, regulates, and maintains a uniform system of aids to navigation within the United States.

a. Action: The State will assist the Coast Guard in identifying changes, improvements, or repairs that may be required to aids to navigation, in cooperation with the Harbor Safety Committees.

## J. Public Information/Education

The Parties agree that public education in areas of pollution prevention, which includes oil, hazardous substances and garbage, is a high priority and each agency shall seek opportunities to coordinate pollution prevention public awareness and education programs.

1. Action:

a. Marinas: Public information and education will be developed cooperatively and implemented targeting marina operations to reduce pollution from oil, toxic substances, garbage, and sewage.

4. Tug Escorts

Federal and State law authorize the regulation of the use of tug escorts and may require either equipment or standards of performance deemed necessary for the function.

a. Action:

(i) The State and the Coast Guard agree to consult with each other in issuing any regulations requiring tug escorts to ensure that they are consistent.

(ii) Towing Equipment: The Parties agree to review requirements for tow equipment for barges and tank vessels carrying oil in bulk with the purpose of determining whether additional standards for equipment, maintenance, operation, and inspection should be adopted.

5. Aids to Navigation (ATON)

b. Small Oil Transfer Facilities: Public information and education will be developed cooperatively and implemented targeting small oil transfer facilities to reduce pollution from **oil, toxic substances, garbage, and sewage.**

c. Recreational Vessels: Public information and education will be cooperatively developed and implemented targeting the recreational boating community to reduce pollution from oil, toxic substances, garbage, and sewage.

RESPONSE

Federal law establishes the Coast Guard as the primary federal agency tasked with responding to oil spills on waters of the United States. In such cases, the Federal On Scene Coordinator (OSC) is the predesignated official responsible for cleanup operations. The OSC may direct or monitor all Federal, State, and private actions in response to an oil spill or a potential oil spill in State waters. The Parties will respond to marine oil spills as required by and in accordance with the National Contingency Plan (NCP). The OSC will consult, as required by OPA 90 and other applicable Federal law, with the Office of Oil Spill Prevention and Response (OSPR) concerning oil spill response activities. State law provides that OSPR is responsible for coordinating State oil spill cleanup efforts.

1. Action: The Parties agree to work together within the framework of their respective authorities to ensure a coordinated effort with a minimum of duplication is undertaken in response to oil spills.

A. Unified Command System (UCS):

The Unified Command System (UCS) establishes lines of communication, information sharing and

control for the conduct of an oil spill response operation by the adoption of the Area Plan. This system ensures notification procedures are in place which inform cognizant agencies of the State when actual or potential spills that may affect State waters are reported.

1. Action:

- a. Notification: The Parties agree to provide the earliest possible notification of discharges of oil and hazardous substances and imminent threats of such discharges to each other in accordance with applicable law, regulations and policies and consistent with the National Oil and Hazardous Substances Pollution Contingency Plan. In order to provide a single point of contact for the OSC in the event of a marine oil spill, the OSPR Administrator or designee will represent all State agencies and will be the primary point of contact.
- b. Unified Command: The Parties agree to implement a Unified Command to ensure coordination of emergency response **decision making during a pollution** incident. In those circumstances where governmental action is required to develop and **direct action to** clean up or abate the effects of an oil spill, the Parties agree to consider best utilization of existing resources, avoiding duplication while taking advantage of resource availability. The OSC may request the State to undertake response actions on a case-by-case basis, utilizing the Unified Command System to determine the capability of response. If the State assumes responsibility for response activity, the State will conduct those activities as directed by the OSC,—in accordance with the National Contingency and Area Contingency, Plans.
- c. Response Decisions: The OSC will coordinate with the State in decision making relating to the conduct of oil spill response operations including, but not limited to: salvage, lightering, safe haven and other matters affecting the release of spilled oil, its containment or its cleanup.
- d. The Parties agree to establish a joint public information center to provide for the coordinated dissemination of information during a response operation. This provision does not preclude the Parties from making independent responses to the media and the public.

8. Natural Resource Protection

Both Parties recognize the importance of protecting and preserving natural resources in responding to an oil spill event. Both Parties agree that response strategies and procedures will be established through the Unified Command System (UCS), in accordance with applicable laws, regulations and policies, and procedures.

C. Response Monitoring and Technology

Both Parties agree that the stringency and methods used to clean up oil and oily debris shall be established through the Unified Command System (UCS), and through the UCS will decide what level of action is required by the responsible party, and may decide to direct the clean up operations by the responsible party or to assume responsibility for the clean-up operation.

1. Action:

- a. Both Parties agree, through the UCS, to provide timely input and recommendations to the OSC, to the extent practicable, on dispersant usage, in situ burning, bioremediation, and other

non-mechanical cleanup technologies.

b. Both Parties agree that decisions to discontinue clean up operations and demobilize response activities shall be made through the Unified Command System. The State retains the authority to undertake remedial or mitigating actions beyond the response actions required by the National Contingency Plan.

## NATIONAL POLLUTION FUNDS CENTER INFORMATION

### A. The Oil Spill Liability Trust Fund (The Fund).

The Fund provides funding under certain conditions for oil discharge removal actions. The Fund is available in certain circumstances to compensate the State for incurred costs and damages associated with oil discharges. To the extent allowed, 2 State may access the Fund under currently published regulations and National Pollution Fund Center (NPFC) procedures.

1. Action: Upon the publication of regulations implementing Section 1012(d)(2) of OPA 90, the State may negotiate directly with the NPFC to establish a cooperative agreement to provide access to the Fund under Section 1012(d)(2). Any agreement between the State of California and the National Pollution Fund Center shall be attached as an annex to this MOA.

### B. The National Pollution Fund Center (NPFC)

1. The NPFC administers the Oil Spill Liability Trust. Fund (The Fund) in order to: provide State access to the Fund, conduct cost recovery, accept and process claims, and evaluate requests by Federal trustees to fund initiation of the assessment of natural resource damages. The NPFC also administers Certificates of Financial Responsibility and provide CERCLA/Superfund funding to Coast Guard On Scene Coordinators (OSC) responding to hazardous material incidents.

2. An individual State may receive payment from the The Fund in the State's role as a response organization engaged in removal activities consistent with the National Contingency Plan, as appropriate claimant for damages, and in the State's role 2S a natural resource trustee. In addition to the text herewith concerning Section 1012(d)(2) of the Oil Pollution Act or 1990 (OPA 90), the State recognizes the following provisions outline alternative funding methods for State removal activity:

a. Section 1012(d)(1). Regulations under Section 1012(d)(1) of OPA 90 allow the NPFC, upon request of the Governor of a State and as authorized by the Federal On Scene Coordinator (OSC), to obligate The Fund for payment in an amount not to exceed \$250,000 for removal costs, consistent with the National Contingency Plan (NCP), required for the immediate removal of a discharge, or the mitigation or prevention of a substantial threat of a discharge, of oil. The NPFC's Technical Operating Procedures (TOPs) for State access under Section 1012(d)(1) of OPA 90, and the TOPS for resource documentation under OPA 90 are approved guidelines for State use to access the Fund under this **section**.

b. Claims. Regulations under Section 1012(a)(4) of OPA 90 **authorize use of The Fund for the** "payment of claims in accordance **with Section 1013 of OPA 90** for uncompensated removal costs determined by the President [Coast Guard] to be consistent with the NCP or [for] uncompensated damages." Procedures for claims **are found** in 33 CFR Part 136. States have a special status under Section 1013 of OPA 90 regarding claims for uncompensated costs which allows

States to make such claims directly to The Fund rather than first to the responsible party.

c. Working Directly for the OSC. State agencies may work directly for the On Scene Coordinator (OSC) in performing removal actions. In these situations, the OSC issues a Pollution Removal Funding Authorization (PRFA) to the State to establish a contractual relationship and to obligate The Fund. The OSC actively directs and is responsible for the response actions. The OSC may request State assistance and participation in emergency removal actions under CERCLA in response to a hazardous materials incident or threatened incident and where funding for these actions is established in a PRFA.

3. Natural Resource Damage Assessments. A State natural resource Trustee may request access to the Fund for the initiation of an assessment of natural resource damages resulting from a discharge of oil, through a Federal Lead Administrative Trustee (one of the Federal Trustees designated in the NCP), in accordance with the procedures established by the NPFC (Section 6002(b) of OPA 90).

## ENFORCEMENT

Enforcement action by either Party may include civil and criminal penalties, and adverse actions against Coast Guard issued merchant marine licenses and seamen's documents. Action by either Party may preclude opportunities for future actions by the other Party.

### A. Action:

1. Subject to the requirements and limitations of applicable State and Federal law and agency policy, the Parties agree to coordinate marine casualty investigations including, but not limited to: the sharing of information regarding witnesses, reports, analysis, and other available information that may assist in determining the cause of the casualty.

2. Enforcement action undertaken by each of the Parties must occur independently in accordance with applicable laws and regulations. The Parties agree that to the extent they can, they will consult with each other as to intended enforcement action.

3. The Parties agree to investigate the feasibility of the Coast Guard utilizing the Department of Fish and Game Petroleum Chemistry Laboratory for the analysis of Coast Guard oil samples.

## RULEMAKING

A. Issuance of Regulations The Oil Pollution Act of 1990 and other Federal law provides for the issuance of regulations pertaining to the prevention of oil spills from vessels. The Commandant of the Coast Guard has the authority to promulgate such regulations. The Commander, Eleventh Coast Guard District and the respective Captains of the Port have limited authority to promulgate local regulations. Acting under its inherent regulatory authority and under authority not preempted by Federal law, the State has the authority to promulgate regulations concerning oil spill prevention which do not conflict with and which are not otherwise preempted by Federal law. It is the intention of the Parties to maintain close communications to reduce conflict between each Party's permits, directives, and instructions.

### 1. Action:

a. The intent of this section is to avoid conflict and inconsistent regulation in rulemaking wherever

possible, subject to applicable procedural rules and to endeavor to provide a coordinated, synergistic response to oil pollution planning and response. It is the intent of the Parties to endeavor under their respective authorities to assure the best achievable protection for the waters of the State.

b. In addition to the respective Federal and State procedures for notice of opportunity to comment and consideration of existing rules, the Parties anticipate that through their participation on committees and day-to-day working communications, the concerns of each will be discussed and given due consideration.

#### B. Containment and cleanup for refueling, bunkering or lightering operations

OPA 90 and other Federal laws regulate refueling, bunkering and lightering operations. Federal regulations enforced by the Coast Guard govern these operations. Subject to the requirement that they be consistent with Federal regulations, the State may issue its own regulations relating to these same operations.

#### C. Tank Vessel Response Equipment Rules

Federal law governs the standards for response equipment. State law authorizes the adoption of State standards for spill response equipment to be maintained on tank vessels operating in waters of the State. State rules must be consistent with Federal spill response equipment standards.

Pete WILSON  
Governor,  
State of California

M. E. GILBERT  
Rear Admiral, USCG  
Commander,  
Eleventh Coast Guard District

i  
Date: June 2, 1993      -      Date: June 2, 1993 —



State of California

M e m o r a n d u m

To : Ben D. Kor, NCRWQCB  
Steven R. Ritchie, SFBRWQCB  
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Date: APR 28 1995

**Walt Pettit**  
**Executive Director**

From : STATE WATER RESOURCES CONTROL BOARD  
901 P Street, Sacramento. CA 95814 Mail Code G-8

Subject: WAIVER OF WASTE DISCHARGE REQUIREMENTS FOR INCIDENTAL DISCHARGES  
ASSOCIATED WITH OIL SPILL RESPONSE ACTIVITIES

In 1993 the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act was amended to require that the Administrator of the Office of Oil Spill Prevention and Response (OSPR) and the Executive Director of the State Water Resources Control Board (SWRCB) enter into a memorandum of understanding (MOU), which addresses all permits and other requirements pertaining to the incidental discharge of wastewater during oil spill response activities. An MOU was subsequently signed in 1995. A copy is attached for your reference as Attachment 1.

The MOU addresses discharges of oily water which occur during oil spill response activities within or proximate to oil spill response areas. The MOU finds that these discharges are exempt from regulation under a National Pollutant Discharge Elimination System (NPDES) permit. The MOU also provides that the SWRCB will recommend that the coastal Regional Water Quality Control Boards (RWQCBs) waive the issuance of waste discharge requirements for these types of discharges.

The purpose of this memorandum is to request that you take appropriate action to amend the waiver resolution or water quality control plan, as appropriate, for your region to include incidental discharges on the list of discharges for which waste discharge requirements are waived. Waiver of this type of discharge would be in the public interest, as provided' in Water Code section 13269, because the issuance of waste discharge requirements under the circumstances could significantly impede oil spill cleanup. Also, the addition of incidental discharges to an RWQCB's waiver list could be considered categorically exempt from the California Executive Officers.

Environmental Quality Act, Public Resources Code section 21000, et seq. under the emergency project exemption. *See* 14 C.C.R. § 15269. The addition of incidental discharges to an RWQCB's waiver list would also be exempt from review by the Office of Administrative Law under the Administrative Proce-

dure Act, Government Code section 11340, et seq. *See* Gov. Code § 11352(b).

Sample language for inclusion in the RWQCB's waiver resolution is contained in Attachment 2. Please contact Sheila Vassey, Senior Staff Counsel, in the Office of the Chief Counsel at (916) 657-2408 or Calnet 8-437-2408 if you would like further information regarding this matter.

Attachments (2)

cc: Pete Bontadelli Administrator Office of Oil Spill Prevention and Response Department of Fish and Game 1700 K Street, Suite 250 Sacramento, CA 95814

Barry R. Ogilby Carlsmith, Ball, Wichman, Murray, Case & Ichiki 555 South Flower Street, 25th Floor Los Angeles, CA 90071-2326



MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
DEPARTMENT OF FISH AND GAME'S  
OFFICE OF OIL SPILL PREVENTION AND RESPONSE AND THE  
STATE WATER RESOURCES CONTROL BOARD  
RELATING TO  
DISCHARGES ASSOCIATED WITH RESPONSE ACTIVITIES  
CONDUCTED PURSUANT TO CH. 7.4, DIVISION 1  
OF THE GOVERNMENT CODE

WHEREAS, The Administrator; of the Office of Oil Spill Prevention and Response (hereinafter referred to as OSPR) and the Executive Director of the State Water Resources Control Board (hereinafter referred to as SWRCB), acting for the SWRCB and the Regional Water Quality Control Boards (RWQCBs), are directed by Government Code section 8670.7, as amended by Stats. 1993, ch. 736, to enter into a memorandum of understanding (MOU) to address discharges, other than dispersants, that are incidental to, or directly associated with, the response, containment, and clean up of an existing or threatened oil spill in marine waters, conducted pursuant to Chapter 7.4, Division 1 of the Government Code; and

WHEREAS, It is the intent of this MOU that all incidental discharges as defined herein shall occur within the response area in or proximate to the area in which the oil recovery activities are taking place for the purpose of returning any oily water back into the response area; and

WHEREAS, Both the Administrator of OSPR and the SWRCB share the same goal of minimizing any unnecessary deleterious impacts to the environment, or to the public health and safety; and

WHEREAS, The Administrator of OSPR has the primary authority to direct prevention, removal, abatement, response, containment, and cleanup efforts with regard to all aspects of any oil spill in or threatening the marine waters of the State; and

WHEREAS, The SWRCB and the RWQCBs have the primary authority for regulating and ensuring the quality of the waters of the State; and

WHEREAS, This MOU is not effective until approved by the SWRCB and the Administrator of OSPR; and

NOW, THEREFORE, the Administrator of OSPR and the Executive Director of SWRCB (the Parties) have reached the following agreement and clarification of existing law concerning discharges, other than dispersants, that are incidental to, or directly associated with, the response, containment, and clean up of an oil spill in marine waters, pursuant to Chapter 7.4, Division 1 of the Government Code.

I. Definitions

The **Parties agree that for the purposes** of this MOU the following definitions shall apply:

a. Incident Command System or Unified Command Structure

For the purpose of this section the terms “Incident **Command System or Unified Command**

Structure” mean the procedures established for directing personnel, facilities, equipment, and communications during the response, containment, and cleanup of an oil spill incident in marine waters.

b. Incidental Discharge

“Incidental discharge” means the release of oil and/or oily water within the response area in or proximate to the area in **which** the oil recovery activities are taking place during and attendant to oil spill response activities. Incidental discharges include, but are not limited to, the decanting of oily water; in order to conserve oil storage capacity, and the wash down of vessels, facilities, and equipment used in the response

c. Marine Waters

“Marine waters~ include all waters defined as marine waters in California Government Code Section 8670.3(h) and all water otherwise within the jurisdiction of the Administrator of OSPR.under Chapter 7.4, Division 1 of the Government Code.

d. National Pollution Discharge Elimination System Permit (NPDES Permit)

An NPDES Permit is any permit issued by the SWRCB or the RWQCBs pursuant to California Water Code section 13370 et seq., as required or authorized by the Federal Clean water Act, Title 33 U.S.C. 1251 et seq.

e. Oily water

Oily Water means any substance, matter, or medium containing or permeated with any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues therefrom, including, but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, **aviation fuel, oil** sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas. Waste includes, but is not limited to, seaweed, driftwood, debris, and other similar types of materials.

f. Response

Response means the time period when response personnel, acting under the authority of the Administrator, the Federal On-Scene Coordinator, the State On-Scene Coordinator, through the Incident Command System or Unified Command Structure, are performing Response Activities that are reasonably necessary to prevent, reduce, **or mitigate damages** to persons, property, and/or natural resources of this State due to an oil spill incident in marine waters.

g. Response Activities

Response Activities means those activities, consistent with the National Contingency Plan, the State Oil Spill Contingency Plan, or taken at the direction of the Administrator or Federal On-Scene Coordinator through the Incident Command System or Unified Command Structure, in response to a spill, that entail the removal of oil from marine waters of the State. This includes all activities conducted on-water or onshore relating to the separation, recovery, containment, transfer, or treatment of marine waters of the State contaminated by oil and/or oily materials.

h. Response Area

Response Area means the area of marine waters where response activities are occurring as defined by the daily **work plan approved under** the Incident Command System or Unified Command Structure by the Administrator, Federal On-Scene Coordinator, or State On-Scene Coordinator.

i. Waste Discharge Requirements

“Waste Discharge Requirements” are a set of requirements issued by the RWQCBs, pursuant to California water Code section 13260 et seq., regulating the discharge of waste which could affect state waters. Waste Discharge Requirements may be issued by the SWRCB upon the review of an action or failure to act by a RWQCB, pursuant to Water Code section 13320.

II. NPDES Permits

The Parties agree that:

The incidental discharges covered by this MOU are consistent with the State Contingency Plan and the National Contingency Plan. Incidental discharges as described in this MOU which are in compliance with the instructions of the On-Scene Coordinator, pursuant to the National Contingency Plan or the applicable Coast Guard regulations, are excluded from regulation under an NPDES permit, as provided by the Federal Environmental Protection Agency regulation 40 C.F.R. 122.3(d), are consistent with Federal laws and regulations, and do not constitute a prohibited discharge.

III. Waste Discharge Requirements

The Parties agree that:

- a. It is in the public interest for the RWQCBs for the North Coast, San Francisco Bay, Central Coast, Los Angeles, Santa Ana and San Diego Regions to waive the issuance of waste discharge requirements for incidental discharges, within the response area during a spill response as provided in Water Code section 13269. The SWRCB will recommend such action to the RWQCBs.
- b. Such discharges do not create a vested right to discharge, but rather such discharges are privileges, as provided by California Water Code section 13263(g).

IV. Miscellaneous

- a. The terms of this agreement may be changed at any time by the Parties by a written, signed amendment hereto with or without notice to any other person.
- b. The agreement may be terminated by either party at any time without notice to any person other than the other party.
- c. No rights, duties, obligations, or liabilities enforceable at law are created by this agreement.
- d. This agreement does not alter, modify, abridge, or in any way affect any rights, duties, obligations, or liabilities of any person under the laws of the State of California.
- e. In the event that individual and severable portions of this agreement are found to be in conflict

with either state or federal law, regulations or policies, and, therefore, of no effect, the agreement will remain in effect without those provisions unless either party notifies the other in writing that the entire agreement is terminated..

f. Any action to modify, amend, or terminate this agreement may only be taken by the Administrator of OSPR and the Executive Director of SWRCB, or persons to whom this authority is specifically delegated by them. Any such modification is not effective until approved by the SWRCB.

FOR THE OFFICE OF OIL SPILL  
PREVENTION AND RESPONSE:

FOR THE STATE WATER RESOURCES .  
CONTROL BOARD:

Pete Bontelli  
Administrator  
Date~

~

Walt Pettit  
Executive Director  
Date:

## ATTACHMENT 2

### TYPES OF WASTE DISCHARGES IDENTIFIED FOR CONDITIONAL WAIVER OF WASTE DISCHARGE REQUIREMENTS

| <u>Type of Waste Discharge</u> | <u>Conditions</u> |
|--------------------------------|-------------------|
|--------------------------------|-------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Incidental Discharges within the discharge must meet the a response area during a spill definition of “incidental response. discharge” as this, and related, terms are defined in the “Memorandum of Understanding Between the Department of Fish and Game’s Office of Oil Spill Prevention and Response and the State Water Resources Control Board Relating to Discharges Associated with Response Activities Conducted Pursuant to Ch. 7.4, Division 1 of the Government Code”. |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

MEMORANDU OF UNDERSTANDING  
BETWEEN THE DEPARTMENT OF FISH AND GAME'S OFFICE  
OF OIL SPILL PREVENTION AND RESPONSE  
AND THE STATE LANDS COMMISSION

Whereas, Administrator of the Office of Oil Spill Prevention and Response (Administrator) in the Department of Fish and Game (Department) and the State Lands Commission (Commission) have both been accorded significant responsibilities under the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Act), and

Whereas, it is in the interests of the Department and the Commission to coordinate and cooperate in the implementation of their programs, including those required under the Act.

Now therefore is agreed that the Department and the Commission will enact this memorandum of Understanding.

The specific provisions of this Memorandum of Understanding are:

1. It is agreed that the Department and the Commission shall conduct coordinated marine oil spill drills. Such drill shall to the extent practical be coordinated with other State, Federal, and local government agencies and, when appropriate, with the private sector. Each agency may initiate drills for the purposes of fulfilling its own regulatory interests, but the other agency shall be notified at least seven (7) days prior to the beginning of any drill.
2. Section 8670.7 of the Government Code requires the administrator to determine the cause and amount of the discharge with the assistance of the Commission. This assistance shall also be extended to include cooperation between the Department and the Commission in other aspects of spill investigation as requested by the administrator or the administrator's representative on scene.
3. Section 8670.3751 of the Government Code requires the administrator to issue certificates of financial responsibility to tankers and barges. Unless otherwise directed by the Administrator, the Commission staff shall as part of its inspection and monitoring program at marine terminals, check for vessel compliance with the financial responsibility requirement, and notify the Administrator of any failure in compliance. At the request of the Administrator, the Commission shall assist the Administrator in evaluating the accuracy of the specific information regarding marine facility layout and operations that was contained in financial responsibility applications submitted to the Administrator by owners/operators of marine facilities.
4. The Department and the Commission shall cooperate on oil spill prevention and response Training. Each agency shall give notice to the other of proposed training and, if space is available, allow the other agency the opportunity to participate in the training. The cost of training and travel for individual participants will be the responsibility of their respective agencies.
5. Section 867031 of the Government Code requires each operator of a marine facility and vessel to prepare and submit a contingency plan. The administrator is required to prepare regulation for contingency plans and approve all contingency plans prepared under the Act. The Commission is required to review plans for all facilities within the jurisdiction of the Commission. The Department and the Commission shall cooperate on contingency plan review, the preparation of the regulations and the development of enforcement and inspection policies and guidelines for facilities. The Commission may, at the discretion of the Administrator and in the course of its marine terminal inspection and monitoring program, review and monitor contingency plan compliance.

6. In the event of a spill, a responder may request that oil spill equipment required by lease, or contingency plan be moved from its specified site. Such a request may require approval by the Administrator. In addition, Commission leases and regulations may require that changes in operations at marine facilities occur as a result of the movement of oil spill response equipment. It is agreed that the Administrator and the Commission establish a procedure to expedite such considerations.

7. It is agreed that regulations regarding the approach, mooring and departure of vessels operating at offshore marine terminals shall be jointly issued by the Department and the Commission. The Department has specific authority over the safe navigation of vessels to and from the offshore terminal. The Commission has specific authority regarding the operation of the marine terminal. The Commission shall inspect, and monitor the compliance with all state requirements governing the terminal operations. The Commission staff shall also notify the Administrator of any incidents of which it has knowledge involving the failure by a vessel operator to comply with the Administrator's regulations regarding vessel navigation.

8. The programs of the Administrator and the Commission are required by the Act to provide best achievable protection. It is agreed that the Department and the Commission cooperate in determining what constitutes the best achievable protection of coastal resources and marine water.

9. It is agreed that the Administrator and the Commission shall maintain close communications to ensure permits, directives, and instructions are not in conflict with each agency's respective regulations and laws.

State of California

M e m o r a n d u m

Mr. Boyd Gibbons  
Director

Date : June 15, 1992

From Department of Fish and Game

Subject Memorandum of Understanding (MOU)

Attached is a copy of the MOU between the Department of Fish and Game (DFG) and the California Department of Forestry and Fire Protection (CDF).

The MOU sets forth the mechanism and response procedure to be used in the event of a major hazardous material (including oil) incident that exceeds the response resources of the DFG. The MOU provides another step in the prespill contingency planning process.

The Office of Oil Spill Prevention and Response (OSPR) will continue to develop prespill contingency plans to insure the DFG can provide the best response possible, given existing State resources. This preplanning will allow us to fulfill our Fish and Wildlife trustee responsibilities in the event of a major incident.

If further information is desired, please contact Mr. Ryan Brodderick, Deputy Chief of OSPR, Enforcement and Inspection Program at (916) 324-9811.

Pete Bontadelli Administrator Office Oil Spill Prevention and Response

Attachment

cc: Ryan Broddrick, Deputy Chief  
Enforcement and Inspection Program  
Office of Oil Spill Prevention and Response



## MEMORANDUM OF UNDERSTANDING

### BETWEEN CALIFORNIA DEPARTMENT OF FISH AND GAME AND CALIFORNIA DEPARTMENT OF FORESTRY AND FIRE PROTECTION

#### BACKGROUND

1. THIS MEMORANDUM OF UNDERSTANDING (MOU) concerns the establishment and support of an Incident Command System (ICS) during a major hazardous material (includes oil) spill. The MOU is made and entered into by and between the Resources Agency, California Department of Forestry and Fire Protection, hereinafter called CDF, and the California Department of Fish and Game, hereafter called DFG.

#### RECITALS

2. The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 (Senate Bill 2040) has given the Governor the authority to appoint an Administrator of the Office of Oil Spill Prevention and Response (OSPR) who shall have primary responsibility for the implementation of the Act. The Administrator's responsibilities include but are not limited to coordinating State oil spill cleanup efforts in marine waters of the State.

3. The DFG is identified as the State trustee of fish and wildlife resources in Fish and Game Code Section 711.7.

4. The DFG is designated as the trustee of State resources in statute and is the State Agency Coordinator for off-highway hazardous material incidents as defined in California's Hazardous Material Contingency Plan. To provide a level of response to meet these commitments, requires that the DFG have in place a plan to handle major incidents that threaten human health, the environment, and property.

5. The DFG jurisdiction as trustee for fish and wildlife resources is defined in Fish and Game Code Section 1802. It states in part, that the DFG has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically **sustainable populations of those species**.

6. Hazardous material spills require rapid, efficient response and a coordinated clean up to minimize their effects on the public, the environment, and property. Coordinated response from Federal, State, and local agencies as well as from industry.

7. The ICS (Unified Command) is the designation for managing a hazardous material incident involving multiple jurisdictional response.

8. The CDF is responsible for the fire protection, fire prevention, maintenance, and enhancement of the State's forest, range, and brush land resources, contract fire protection, associated emergency services, and assistance in civil disasters and other nonfire emergencies through Public Resources Code Section 713.

9. The CDF has responsibility to respond to hazardous material incidents by statute as referenced in the Hazardous Material Contingency Plan.

10. The CDF has expertise using the ICS and can provide a standing capability to assist in the management of a major spill event. The CDF's proven capability using the ICS would allow the DFG to adequately respond to a spill without duplicating response resources that are fully developed. The frequency of a major spill response is not predictable. Given this unpredictability, this agreement would provide the most practical method of responding to a major incident.

NOW, THEREFORE, in consideration of the mutual promises and conditions herein made, it is agreed as follows:

#### TERM AND CONDITIONS

11. To insure effective utilization of the ICS when the CDF is requested, the DFG will participate in existing internal CDF ICS training (as class space permits), predesignate ICS staff, and conduct drills utilizing the ICS.

12. Interagency Cooperation. This MOU is evidence of the level of cooperation and integration between the DFG and CDF during a spill response in California. However, changes will continue to occur over the duration of this agreement, as well as many daily issues that cannot be addressed in such a document. Resolution of those changes and issues will be resolved in a mutually acceptable manner between the involved parties.

13. Notification (CDF). In the event the CDF arrives first on the scene of a hazardous material spill in which the DFG is the State Agency Coordinator or designated Lead Agency, the CDF will notify the Office of Emergency Services (OES), who will notify the DFG.

14. Notification (DFG). In the event of a major hazardous material incident, the DFG will request through the dispatch office or the OES the need for assistance in establishing an unified ICS. The assistance rendered by the CDF would be secondary to their primary mandates required by law and does not affect any other agreement entered into by the CDF or the DFG.

15. The authority to request the CDF to assist in a spill response in managing an incident under this MOU rests with the DFG Director or Administrator or their designee.

16. Priority of protection. The DFG and the CDF agree that they mutually share responsibilities for life, the environment, and property protection with other agencies. Further, each agency agrees that incident objectives will generally recognize the following priorities:

1. Threat to human life.
2. Threat to natural resource values.
3. Threat to real and personal property.

17. It is agreed that CDF resources once committed to assist in a response to an incident, the resources will remain with the incident until released by the Director or Administrator or their designee. The exception being a Governor declared disaster affecting human life that requires CDF resources.

18. The CDF resources that may be requested by the DFG to respond to an incident may include, but are not limited to incident management team, logistic support such as communication units, mobile kitchens

with stores, and/or medical unit.

19. Limitations. Nothing in this agreement shall be interpreted to conflict with or be inconsistent with any Federal or State statute, regulation, or other provision of law applicable to the CDF or the DFG. Furthermore, this **agreement** does not constitute a delegation of any authority by either party to the other.

20. Procurement Authority. Procurement incurred in support of an incident will be mutually agreed upon by parties and the costs documented by the designated Finance Section Chief.

21. Accounting for Assistance Costs. The CDF shall document all expenditures attributable to the incident (this will include, but not be limited to salary information, overtime, employee benefit costs, travel, and subsistence related to response, etc.). All such costs will be reimbursable to the CDF by the DFG.

22. Billing Procedures. On incidents where costs are incurred pursuant to the terms of this MOU, all bills shall be submitted to the DFG for reimbursement, in duplicate, as soon as possible, but no later than 120 days after the incident response has been demobilized.

All bills for services provided to the State will be presented to the DFG Incident Commander upon demobilizing or mailed to the following address:

Department of Fish and Game  
Office of Oil Spill Prevention and Response  
1416 Ninth Street  
Sacramento, California 95814

23. Cancellation or Amendments Procedure. This agreement may be canceled by either party by providing 30 days prior written notice to the other party, or may be amended at any time by written mutual consent of the parties involved.

24. Employment Policy. It is agreed that employees of the parties to this agreement shall at all times be subject only to the laws, regulations, and rules governing their employment, regardless of agency, and shall not be entitled to compensation or other benefits of any kind other than specifically provided by the terms of their employment.

25. Indemnification. The DFG shall indemnify and hold harmless the CDF against any and all claims made against the CDF arising from their lawful actions under this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this agreement.

STATE OF CALIFORNIA  
DEPARTMENT OF FISH AND GAME

STATE OF CALIFORNIA  
DEPARTMENT OF FORESTRY  
AND FIRE PROTECTION

Boyd Gibbons  
Director  
Date

Richard A. Wilson  
Director  
Date

MEMORANDUM OF AGREEMENT  
ON  
OIL SPILL PREVENTION AND RESPONSE  
BETWEEN  
WILDLIFE PROTECTION DIVISION  
AND  
OFFICE OF OIL SPILL PREVENTION AND RESPONSE

WHEREAS, marine oil spills require a rapid, efficient, and coordinated response and cleanup by Federal, State, and local agencies as well as from private entities to minimize the deleterious effects on human, wildlife, and other natural resources; and

WHEREAS, both the Office of Oil Spill Prevention and Response (OSPR) and the Wildlife Protection Division (WPD) recognize the critical roles each has within their respective areas of authority in preventing oil spills and in planning for and responding to oil spills; and

WHEREAS, the Parties recognize that cooperation between them in the implementation and exercise of their respective roles is essential to avoid conflict and unnecessary duplication; and

WHEREAS, the Parties believe and intend that by acting in a cooperative and coordinated manner, the effect will be an enhanced oil spill prevention and response effort in the State of California;

NO~ THEREFORE, the Parties agree, as consistent with their respective policies and available resources, to cooperate and . coordinate their efforts in implementing their respective roles and exercising their respective duties related to oil spill prevention and response.

PARTIES

The parties to this Memorandum of Agreement (MOA) are the OSPR and the WPD.

PURPOSE OF THE AGREEMENT

The purpose of this MOA is to ensure the Parties exercise their respective roles regarding oil spill prevention and response in a manner so as to avoid unnecessary duplication

III

OIL SPILL RESPONSE AND PREPAREDNESS

The patrol vessels of WPD shall be prepared to respond to all aspects of marine oil spills. Actions include the following:

- A. Personnel shall be trained and equipped to collect evidence samples from a marine pollution incident. The required equipment shall be on board and in good condition and trained personnel available to use it whenever the vessel is underway.
- B. Patrol vessels shall be in such a condition that they may function as the on-water command post, if

needed. Communications equipment, power plant, and living facilities (heads, galley, refrigeration, bunks, etc.) shall be operable and maintained.

C. Patrol vessels shall be available to aid in animal rescue efforts and environmental damage assessments. Patrol vessels may be asked to transport and/or provide quarters for Environmental Specialists, Biologists, and others in the event of a major pollution incident.

D. Patrol vessels shall respond to unconfirmed spill reports, if practical, to determine if they are valid, and conflict and to ensure best achievable protection from the impact of pollution incidents which are within or may impact the marine waters of the State of California.

## PATROL AND MONITORING OF MARINE WATERS

The patrol vessels of WPD shall conduct information gathering, proactive patrol and routine monitoring of areas with potential for marine oil spills. Actions include the following:

A. Patrol vessels shall conduct directed patrols to offshore oil platforms, shipping lanes and separation zones, areas of lightering and bunkering, nearshore terminals, and commercial anchorages to monitor activities (both private and military) which might result in unlawful discharge of petroleum products into marine waters.

B. In the event of a spill, patrol vessel personnel shall photograph platforms, ships, barges, facilities, etc. and record date, time and position.

C. Patrol vessels shall conduct night patrols in the above areas to detect covert bilge pumping and deballasting and other unlawful petroleum discharges.

D. Patrol vessels shall conduct monitoring of small craft marina operations and provide informational material relative to OSPR's small craft marina program to the facility operators. The latter will be provided to patrol vessel operators by the OSPR.

## V

## DRILLS AND EXERCISES

The patrol vessels of WPD shall be available for drills and exercises in which the Department is involved. Actions include the following:

A. Patrol vessels may be called upon as a participant in a drill or exercise and may be involved in activities such as boom deployment, vessel escort, traffic control, and security.

B. Patrol vessels may be called upon to act as observation platforms for officials, dignitaries, and other observers while a drill or exercise is being conducted.

## VI

## TRACKING AND ACCOUNTABILITY OF OSPR FUNDS

The patrol vessels of WPD shall be accountable for an amount up to One Hundred and Fifty Thou-

sand Dollars (\$150,000) during fiscal year 1993-1994 in OSPR funds. Only on-water and underway expenses will qualify for funding. Time spent for maintenance, dockside, at anchor, starting up, shutting down, cleaning up and securing are not proper OSPR functions unless specifically authorized by an OSPR Captain, or higher ranking official, -during an actual spill response. Actions include the following:

- A. Patrol vessel personnel shall record in their vessel logs the date, time, and position of OSPR-related contacts.
- B. Patrol vessel personnel shall submit the appropriate reports for each response.
- C. Patrol vessel personnel shall record in their vessel logs the number of individuals and operating hours spent on OSPR related activity and indicate such by labeling them "OSPR" in the space provided for activity code. Activities related to an identified spill shall be coded with the appropriate "PCA" number.
- D. Patrol vessel personnel shall complete exceptional time reports monthly and forward them to the appropriate OSPR Captain for review and approval.

## VII

### AGREEMENT

- A. This agreement represents a voluntary understanding between the OSPR and the WPD of the Department of Fish and Game.
- B. The terms of this agreement may be changed at any time by the parties by a written, signed amendment hereto with or without notice to any other person.
- C. The agreement may be terminated by either party at any time, without notice to any person other than the other party.
- D. Any action to modify, amend or terminate this agreement may only be taken by the Administrator of the OSPR or the WPD Chief of Patrol or persons to whom this authority is specifically delegated.

**Memorandum of Agreement Between the  
U. S. Coast Guard Captain of the Port San Diego and the Commander, Naval Base San Diego for  
Cooperation in Oil Spill Prevention and Response**

I. PURPOSE: To specify joint U. S. Coast Guard and U. S. Navy procedures for oil spill prevention and response within the coastal and inland waters surrounding San Diego County.

II. BACKGROUND: In accordance with the National Contingency Plan (NCP), Title 40 Code of Federal Regulations 300.120(a)(1), the USCG Captain of the Port (COTP) shall ensure that a proper response is initiated to all oil spills which threaten the Coastal Zone, and shall serve as On-Scene Coordinator (OSC) of all response efforts, including responses to discharges from Naval vessels and facilities. The NCP also authorizes the OSC to use federal resources in oil spill cleanup when adequate commercial resources are not available. Under CINCPACFLTINST 5400.12N, Commander, Naval Base San Diego (COMNAVBASE) Operations Officer has been designated the Naval On-Scene Coordinator (NOSC) for oil spills emanating from naval units within the San Diego area. The Captain of the Port and COMNAVBASE also share responsibility to ensure Naval oil transfer facilities comply with federal pollution prevention regulations.

Both the Coast Guard and the Navy have access to unique resources useful in an oil spill response. This was recognized in the 1980 Interagency Agreement (IAA) Between the United States Navy and the United States Coast Guard for Cooperation in Oil Spill Cleanup Operations and Salvage Operations which prescribes conditions under which the Coast Guard and Navy will provide resources to each other for oil spill response. It also authorizes Coast Guard OSC's and Naval Commands to enter into local agreements to pre-arrange use of each others resources.

Captain of the Port San Diego and COMNAVBASE San Diego are accordingly entering into this agreement to establish joint procedures to prevent and respond to oil spills.

III. APPLICABILITY: This agreement is applicable to oil spill prevention and response activities within the San Diego Coastal Zone, as delineated by the San Diego Area Contingency Plan (ACP), and governing U.S. naval instructions/regulations. This generally includes U.S. navigable waters and coastal waters around San Diego County. A detailed description of the San Diego Coastal Zone can be found in Annex A to this agreement.

IV. PREVENTION: In addition to required U.S. Coast Guard and U.S. Navy inspections of naval oil transfer facilities, the parties agree to conduct joint training and exercises.

A. COMNAVBASE is responsible for training naval units in oil spill prevention, reporting, and response. Upon request, the Captain of the Port will provide personnel to assist in this training, consistent with the availability of resources.

B. To meet requirements of the National Preparedness for Response Exercise Program (PREP), the Captain of the Port and COMNAVBASE will conduct annual Joint pollution response exercises. Items to be exercised include provisions of this MOA, the San Diego ACP, local naval contingency plans, and new equipment, tactics, or strategy. Exercises will be in accordance with PREP guidelines and will range from Spill Management Team table-top exercises through full field exercises.



## RESPONSE

A. Policy.

(1) Effective oil spill response techniques are predicated upon early and substantial intervention efforts, since natural conditions work to rapidly spread the spilled oil throughout the environment. Coast Guard OSC policy on any oil spill is to rapidly respond with all available resources, and to activate additional required or backup resources as quickly as possible. This includes all government, commercial, and private resources as deemed necessary, whether the spill is a Navy or non-Navy spill.

(2) COMNAVBASE San Diego will provide a Naval On-Scene Coordinator (NOSC) for all oil spill incidents in which Naval units participate in response operations. On Navy oil spills, the NOSC will serve as the Navy representative of the Unified Command. The Coast Guard OSC and NOSC will rapidly consult to assess the situation, determine resource shortfalls, and order in additional necessary resources without delay. In non-Naval oil spills, the NOSC will assist the OSC by acting as the U. S. Navy point of contact and directing Naval assets.

(3) The FWPCA requires persons having knowledge of an oil spill to *immediately* notify the National Response Center (NRC) of the existence and location of the discharge. COTP San Diego will accept reports of spills from naval units promptly relayed by COMNAVBASE (i.e. by telephone or radio) as meeting the intent of the FWPCA.

B. Supply of Naval Resources to the Coast Guard.

(1) The Captain of the Port, as the pre-designated federal OSC, may request COMNAVBASE's support of federal government efforts to control and cleanup a non-Navy discharge. In such a case, COMNAVBASE will provide the following resources:

(a) Oil spill control and cleanup equipment (such as booms, sorbants, skimmers, dips, etc.) and personnel to deploy/operate this equipment.

(b) Oil spill consultation, evaluation, planning, and operational services.

(c) Naval craft, vessels, and aircraft.

(2) These assets will be under the direction of the USCG OSC from the time they are delivered to the OSC through the time they are returned to the Navy. Direction within the context of this agreement means the OSC will prescribe tasks to assigned Naval units at the highest organizational level possible (normally the NOSC) versus directing specific actions by individual personnel, craft, vessels, or aircraft.

(3) Naval assets will be obtained by telephoning COMNAVBASE San Diego Operations Officer during working hours, and the COMNAVBASE Staff Duty Officer during non-working hours. For larger spills this telephone request for USN assistance will be followed up with a documenting message request by the Captain of the Port.

C. Supply of Coast Guard Resources to the Navy.



(1) When COMNAVBASE requests U. S. Coast Guard assistance in responding to oil discharges from facilities or vessels under Navy jurisdiction, the U. S. Coast Guard will provide the following resources:

(a) Oil spill control and cleanup equipment such as boom and sorbent pads.

(b) Oil spill consultation, evaluation, planning, and operational services.

(c) Coast Guard craft, vessels, and aircraft.

(2) These assets will be under the direction of the US Navy OSC from the time they are delivered to the NOSC through the time they are returned to the Coast Guard. Direction within the context of this agreement means the NOSC will prescribe tasks to assigned Coast Guard units at the highest organizational level possible (normally the OSC) versus directing specific actions by individual personnel, craft, vessels, or aircraft.

(3) These assets will be obtained by contacting the Port Operations Officer at the USCG Marine Safety Office during working hours, and the USCG Group Operations Center after working hours. For larger spills this telephone request for USCG assistance will be followed up with a documenting message request by COMNAVBASE.

D. Reimbursement. The Navy may be reimbursed for a response to a non-Navy oil spill from the Oil Spill Liability Trust Fund. Cost Accounting forms and detailed guidance on documentation will be provided by the OSC to ensure that required information is submitted for cost recovery.

VI. INVESTIGATION: The U. S. Coast Guard Captain of the Port has responsibility for enforcing federal law on U. S. navigable waterways and the high seas within the COTP zone. Under E.O. 12088 and delegated authority, COMNAVBASE has primary responsibility for enforcing federal law among subordinate naval commands. Both parties agree to conduct joint investigations for all oil spills suspected of originating from U. S. Navy vessels or facilities. This will facilitate sampling of suspect sources, identification of responsible parties, determination of spill cause, and recommendations for corrective action to appropriate authority. The NOSC shall act as the USN representative during such joint investigations.

VII. PUBLIC AFFAIRS: Agency policies require prompt, expeditious, and forthright release of information to the public. Each party is expected to handle its own public affairs in accordance with their respective procedures. In instances where a Unified Command is established during an oil spill, both parties agree to staff a Joint Information Center to respond to public queries, prepare public statements, and coordinate news releases.

VIII. INFORMATION SHARING: To enhance mutual prevention and response efforts, both parties agree to share investigation and statistical information.

A. The Captain of the Port will provide a monthly summary of all oil spills from Navy vessels and facilities. The report will include date and time of spill occurrence, location, source, amount spilled and recovered, and cause. The report will also include a section on naval assistance rendered during cleanup operations of non-Navy spills. COMNAVBASE will review this information to ensure that both the Captain of the Port and COMNAVBASE are receiving appropriate notifications.

C. COMNAVBASE will share with the Captain of the Port a monthly report of final case resolutions for

inclusion into the USCG Marine Safety Information System (MSIS) database.

IX. IMPLEMENTATION: This agreement replaces the current MOA. It becomes effective upon signature by both parties and may be amended at any time by mutual consent. It may be terminated at any time upon delivery of written notification of termination from either party. . .

Signature:

.

Commander, USCG

Title: U.S. Coast Guard  
Captain of the Port  
San Diego, California

Date: 15 April, 1994

Signature:

.

Rear Admiral, USN

Title: Commander,  
U. S. Naval Base  
San Diego, California

Date: 18 April, 1994

Attachments:

Annex A - Jurisdictional Boundaries  
Annex B - List of Contact Telephone Numbers

04/15/94

## ANNEX A

### JURISDICTIONAL BOUNDARIES

The boundaries of the San Diego Coastal Zone are as follows:

Beginning at the international border and the sea, east and north along the eastern limits of Border Field State Park to the mouth of the Tijuana River; across the River's mouth to the eastern limit of the Silver Strand State Beach to Palm Avenue: east to I-5; north to Harbor Drive; north to Scott Street; south to Talbott Street; west to Hill Street; west to Sunset Cliffs Boulevard; north to I-8; east on I-8 to I-5; north to Grand Avenue; west to Mission Boulevard north to La Jolla Boulevard; north to Prospect Street; north to Torrey Pines Road; north along Torrey Pines road to Route S21 (North Torrey Pines Road); north to I-5 (Oceanside); north on I-5 to the San Diego/Orange County line, and south of a line that is drawn 255 True from San Mateo Point, out to 200 miles (Magnuson Fishery Conservation and Management Act [16 USC Part 1801 et seq.]).

04/15/94

## ANNEX B

### LIST OF TELEPHONE CONTACT NUMBERS

COMNAVBASE Duty Officer - Phone: 557-1824  
MSO Duty Officer - Phone: 557-5860 Pager 557-1159

Operations Officer  
LCDR Howard Moore, USN - Phone: 532-1824 Pager: 645-3563

Chief of Port Operations  
LT Rondal Litterell, USCG - Phone: 557-5860 Pager: 557-1115

## AGREEMENT CONCERNING RESPONSE AND CLEAN UP OF PETROLEUM PRODUCTS

THIS AGREEMENT is made by and between the UNITED STATES COAST GUARD MARINE SAFETY OFFICE SAN DIEGO, and the COMMANDER, NAVAL BASE, SAN DIEGO. This Agreement pertains to the coastal and inland waterways within the County of San Diego.

In order to ensure a prompt, appropriate level of response and cleanup of petroleum products, the following agreement is entered into by signatory agencies.

For the purpose of this Agreement the term waterways will include the Coastal Zone delineated by the Region IX Oil and Hazardous Substance Pollution Contingency Plan which specifies the Coast Guard On Scene Coordinator's boundaries as: "Beginning at the International border and the sea, east and north along the eastern limits of Border Field State Park to the mouth of the Silver Strand State Beach to Palm Avenue: east to I-5; north to Harbor Drive: north to Scott Street: south to Talbot Street: west to Hill street; west to Sunset Cliffs Boulevard: north to I-8; east on I-8 to I-5; north to Grand Avenue; west to Mission Boulevard: north to La Jolla Boulevard; north to Prospect Street; north to Torrey Pines Road; north along Torrey Pines Road to Route S21 (North Torrey Pines Road); north to I-5 (Oceanside); north on I-5 to the San Diego/Orange County line."

When the U.S. Coast Guard Federal On-scene Coordinator (FOSC) requests the U.S. Navy's support of the Federal Government's efforts to control and cleanup a non-Navy oil discharge, the U.S. Navy will provide the following resources, if available:

- (1) Oil spill control and cleanup equipment (such as boom, sorbents, skimmers, dips, etc.) and personnel to deploy/ operate this equipment.
- (2) Oil spill control consultation, evaluation, planning, and operational services.
- (3) Naval craft, vessels, and aircraft.

These assets will be under the operational control of the USCG FOSC from the time they are delivered to USCG FOSC through the time the assets are redelivered to the Navy. Operational control within the context of this agreement means the FOSC will prescribe tasks to assigned Naval units at the highest organizational level possible, versus directing specific actions by individual personnel, craft, vessels, or aircraft.

These assets will be obtained by contacting the Commander, Naval Base, San Diego Operations Officer during working hours, and the Commander, Naval Base, San Diego Staff Duty Officer after working hours and on weekends. This telephone request will be followed up with a documenting request message from the U.S. Coast Guard Marine Safety Office.

When the U.S. Navy requests U.S. Coast Guard assistance in responding to oil discharges from facilities or vessels under Navy Jurisdiction, the U.S. Coast Guard will provide the following resources, if available:

- (1) Oil spill control and cleanup equipment such as boom, sorbent pads.

(2) Oil spill consultation, evaluations, planning, and operational services.

(3) Coast Guard craft, vessels, and aircraft.

These assets will be under the operational control of the US Navy OSC from the time they are delivered to US Navy OSC through the time the assets are redelivered to the Coast Guard. Operational control within the context of this agreement means the Navy OSC will prescribe tasks to assigned Coast Guard units at the highest organizational level possible, versus directing specific actions by individual personnel, craft, vessels, or aircraft.

These assets will be obtained by contacting the U.S. Coast Guard Captain Of The Port at the U.S. Coast Guard Marine Safety Office during working hours, and the U.S. Coast Guard Operations Center after working hours and on weekends. This telephone request will be followed up with a documenting request message from the U.S. Naval command requesting U.S. Coast Guard assistance.

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The FOSC is responsible for ensuring that proper cost documentation records are maintained. In order for the Navy to be reimbursed from the Oil Spill Liability Trust Fund, daily records of personnel hours and equipment used, which have been approved by the FOSC, must be turned into the FOSC. Cost accounting forms and detailed guidance on documentation will be provided by the FOSC to ensure that required information is submitted for cost recovery.

Dated this 19th day of June 1992.

UNITED STATES COAST GUARD COMMANDER, NAVAL BASE  
MSO SAN DIEGO, CALIFORNIA SAN DIEGO, CALIFORNIA

By

By

P. MONTORO, CDR, USCG  
Commanding Officer

# AGREEMENT

THIS AGREEMENT is made by and between the UNITED STATES COAST GUARD MARINE SAFETY OFFICE SAN DIEGO, and the COUNTY OF SAN DIEGO HAZARDOUS INCIDENT RESPONSE TEAM POLICY COMMITTEE. This Agreement pertains to the coastal and inland waterways within the County of San Diego.

In order to ensure a prompt, appropriate level of response and cleanup of petroleum products, hazardous materials, and hazardous wastes, this following policy is agreed to by this signatory agencies.

For the purpose of this .agreement the term waterways will include the Coastal Zone delineated by the Region IX Oil and Hazardous Substance Pollution Contingency Plan which specifies the Coast Guard On Scene Coordinator's boundaries as: ~Beginning at the International border and the sea, east and north along the eastern limits of Border Field State Park to the mouth of the Silver Strand State Beach to Palm Avenue; east to I-5; north to Harbor Drive; north to Scott Street; south to Talbot Street: west to Hill Street; west to Sunset Cliffs Boulevard; north to I-8; east on I-8 to I-5; north to Grand Avenue; west to Mission Boulevard; north to La Jolla Boulevard; north to Prospect Street; north to Torrey Pines road; north along Torrey Pines Road to Route S21 (North Torrey Pines road); north to I-5 (Oceanside); north on I-5 to the San Diego/Orange County line.”

When there is a discovery or a report of a spill, release or abandoned containers of oil or other petroleum based products or hazardous materials or wastes, signatory agencies shall make mutual notifications. Immediately upon receiving a report, first responding agencies will investigate and request response from the signatory agencies as appropriate.

Local jurisdictions will take whatever actions are necessary, within their capabilities, experience and training, to reduce the possibility of further risk to waterways and/or other environmental concerns posed by any oil or hazardous materials product. This is limited to immediate mitigation necessary to stabilize the incident and does not extend to funding for protracted cleanup or disposal.

When the Hazardous Incident Response Team (HIRT) is requested, they will investigate to determine the magnitude of the spill or release, the condition and type of containers, if any, and the material involved. HIRT will attempt to locate the spiller/generator and/o— property owner. If the material is suspected or found to be a CERCLA product, or products (which includes hazardous materials and hazardous wastes), and the responsible party cannot be located or is taking inadequate action, the HIRT will initiate a request for State Super Funds. In addition, when requested, HIRT will assist the Incident Commander or On Scene Coordinator in coordinating proper cleanup of oil or hazardous material spills.

Under the National Contingency Plan the United States Coast Guard (USCG) is the predesignated Federal On scene Coordinator (FOSC) for oil and hazardous substances spilled in the coastal zone.

Under this authority, the USCG assists the local jurisdictions Incident Commander in coordinating cleanup operations to a CERCLA incident. In the absence of appropriate action by a responsible party and denial by Department of Health Services (DOHS)for State Super Funds and denial of California Fish and Game funds, the USCG will access CERCLA to insure a timely and proper cleanup.

If the product is determined to be oil or a petroleum based product and the responsible party is unknown or taking inappropriate action, the USCG will initiate cleanup action utilizing funding available under the

011 Pollution Act of 1990.

Dated this 15th day of April, 1994 !

UNITED STATES COAST GUARD HAZARDOUS INCIDENT RESPONSE TEAM MSO SAN DI-  
EGO, CALIFORNIA POLICY COMMITTEE

By

By

G. F. WRIGHT, CDR, USCG

G. TOCKSTEIN, CHIEF  
CHAIRMAN, HIRT POLICY COMMITTEE

# Annex L

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## **ANNEX L PUBLIC AFFAIRS**

**PURPOSE:** The purpose, objective, and role of the UCS (Unified Command System) Public Affairs is to:

Collect, coordinate and disseminate official information to media government officials and the general public.

Establish and operate a Joint Information Center (JIC) as needed to disseminate official information.

Schedule, organize and conduct media briefings, interviews, town meetings and tours.

Provide media liaison to disseminate official government releases and arrange for media to visit sites with escort.

Act as spokesperson when FOSC/SOSC is not available.

Advise the UCS of media and public demands, needs, expectations and perceptions.

Brief and prepare UCS representatives to effectively conduct media interviews, briefings and town meetings.

A community affairs section provides assistance to local residents in the form of an “800” telephone bank with information about health & safety, transportation disruptions, filing claims, and current information. This section would also organize and conduct town meetings in locations as appropriate to satisfy the needs of local citizens. (See Appendix II.)

An internal affairs section provides information to all UCS field, support, and command staff. At minimum this would include the daily fact sheets provided by the JIC. (See Appendix III.)

Maintain a protocol staff to coordinate access and information to government and public officials. (See Appendix IV.)

Establish a photo documentation section to provide still and video coverage of the ongoing effort to contain and clean-up the spill. Responsible for documenting and cataloging the event for use by the media and historical records. (See Appendix V.)

**BACKGROUND:** The expectations and demands of the public and the media have increased Public Affairs responsibilities to a position of critical importance. An open and assertive program is absolutely necessary to ensure continued public trust and confidence in their government’s ability to handle emergencies, disasters and significant events.

1. This contingency plan is based on the definition, “Spill of National Significance,” contained in Annex I, Appendix I of this plan. As a “Worst Case Scenario”, the resources of local, county, state, and federal government are severely taxed to their ability and additional resources are brought to bear on the situation. Coast Guard public affairs resources would require the assistance from outside the 11th Coast Guard District and include a “long-haul” organization that would be in place for months, or even years.

2. Spills smaller than the “Worst Case Scenario” are tackled with the same organization structure only scaled to meet the demands and needs of the media and local public.

**RESPONSIBILITIES:** The designated Public Affairs Officer shall be responsible to the FOSC/SOSC to fulfill the responsibilities listed above. Each member of the public affairs staff, regardless of agency affiliation, has a responsibility to the UCS and the public at large to act in the best interest of UCS effort and the public. (See Figure L-I-1 for a Checklist for Public Affairs Response to Pollution Incidents.) An organization chart is contained in Tab A of this Annex.

**RESOURCES:** A successful public affairs program will rely on the diversity of representation on the JIC and Community Affairs staffs. Representation, in addition to the Coast Guard, OSPR, and RP, must include county and local government, cleanup contractors, wildlife protection agencies (Marine Mammal Center, Bird Rescue Center, etc.), and other public affairs specialists from contributing organizations.

1. People: The command structure is organized around; Federal (USCG), State/Local (OSPR), and Responsible Party (RP). The Public Affairs division is organized along these same lines with the PAO, JIC director, Community Relations director, Internal Information director, and Protocol Officer assigned to the positions by the senior individual from each of the three lead organizations.

2. Facilities: Public Affairs office spaces (JIC, Community Relations, etc.) should be located in proximity to the UCS. This facilitates information gathering and allows for daily briefings by the command (USCG/OSPR/RP).

3. Equipment: Minimum equipment needs are contained in Figure L-I-2 of this Annex. Quantity depends on staffing and size/duration of the cleanup operation.

## **APPENDIX I GENERAL RULES FOR MEDIA INTERACTION**

**PURPOSE:** The general public's opinion of an oil spill effort is not always based upon what action has been taken, but upon what information they have received. Supplying information to the media is a critical component of pollution response, and is a primary function of the Coast Guard On Scene Coordinator (OSC). Early and accurate news releases serve to minimize public apprehension and to enhance their faith in the response community's ability to deal with oil spills.

**DISCUSSION:** To ensure an accurate flow of information, a single point of contact or pool of public affairs personnel should be established for media relations. The number of people needed to respond to inquiries will vary depending on the size of the incident and the media interest involved. The OSC has many resources available to assist with the media. For small spills, the assistance of the unit Public Affairs Officer (PAO) may be sufficient. For larger spills with more media interest, it may be necessary to seek assistance from other sources such as Public Information Assist Team (PIAT), District Public Affairs, state OSPR PA, state and county OES, and private industry.

1. **MEDIA CONFERENCES AND NEW BRIEFS.** Pollution incidents that generate significant media interest normally require press conferences or questions of senior response officials. People arranging conferences and briefings should ensure that top officials are available and up-to-speed on any special interest

areas. It is beneficial to provide a press release, statement or press packet prior to conducting a press conference. The spokesperson(s) should approach the conference with a clear idea of the specific points to be discussed and anticipate questions that may be posed. Charts, diagrams and other visuals serve to facilitate presentations and clarify response actions.

2. SCHEDULED NEWS CONFERENCES. A schedule of the times and locations for news conferences should be published and made available to the media well in advance, whenever possible. This can be accomplished with a news advisory. It may be beneficial to conduct press conferences near the site of a pollution incident.

3. LOCATION FOR NEWS CONFERENCES. Public buildings in the area which could handle the expected media representatives should be quickly identified. This may include Coast Guard facilities, fire stations, police stations or other state and local government buildings. One alternative is to conduct a conference or briefing on scene or from alongside a mobile command post. On scene conferences or briefings must be carefully coordinated to ensure efforts to cleanup the spill are not disrupted. For press briefings, efforts should be made to find a location which provides convenient access for federal, state and local officials and which is large enough to accommodate the anticipated number of media personnel.

4. SITE ACCESS BY MEDIA. Some members of the media will request access to the spill site for photo opportunities. Direct access to private property such as facilities, vessels or barges will remain under the control of the owner. It may be advantageous to make a Coast Guard vessel available to tour the affected area from the waterside. When media interest exceeds the capacity of the Coast Guard vessel, it will be necessary to form a press pool. The selection of participants is best left to members of the media. The media may also obtain their own vessel or aircraft with which to view the spill site. They will continue to be governed by a Security or Safety Zone that may be in effect unless granted specific access by appropriate authority. (See also Annex J, Appendix II, Tab I; Air Ops/Air Safety.)

5. INTERVIEWS BY CLEAN UP PERSONNEL. Members of the media may also approach personnel at a spill site. If possible, they should be referred to the JIC. Agency representatives on scene may answer questions regarding their particular role. The rule of thumb is, if it's your job you can talk about it, if it's not, then refer them to whomever is responsible. (See Tab D to this Appendix.)

#### **TAB A MEDIA CONTACTS/PUBLIC AFFAIRS RESOURCES**

##### **Coast Guard**

Public Affairs Detachment NORCAL (510) 437-3324/5

FAX (510) 437-5918

Pagers: Supervisor (510) 425-4368

Duty PA (510) 425-4320

Cellular Phone: (415) 279-8511

District OPCEN (310) 980-4400

District Public Affairs (310) 980-4300  
ext. 142/144

**Public Information Assist Team** (919) 331-6025

FAX (919) 331-6012

##### **Office of Spill Prevention & Response (Sacramento)**

|                  |                |
|------------------|----------------|
| Office           | (916) 327-9516 |
| Pager            | (916) 326-0261 |
| 24-Hour Dispatch | (916) 445-0045 |

### Office of Emergency Services

1-800-852-7550

### Wire Service

#### [San Francisco]

|                            |                |
|----------------------------|----------------|
| Bay Cities News Service    | (415) 552-8900 |
| FAX                        | (415) 552-8912 |
| Associated Press           | (415) 621-7432 |
| FAX                        | (415) 552-9430 |
| United Press International | (415) 552-4471 |
| FAX                        | (415) 552-3585 |

#### [Los Angeles]

|                            |                |
|----------------------------|----------------|
| Associated Press           | (213) 626-1200 |
| FAX                        | (213) 346-0200 |
| United Press International | (213) 620-1230 |

## **TAB B JOINT INFORMATION CENTER (JIC)**

**BACKGROUND:** The coordinated, unified and pre-designated response method of Joint Information Center (JIC) has proven most effective to meet the media and public demands that accompany a large scale or major event. Once established, the JIC will function as a single point of contact for the collection and dissemination of all official UCS information.

**COORDINATION:** It is imperative that a Joint Information Center be efficiently supervised, staffed, coordinated and employed. The JIC must have a basic organization and structure while maintaining a large degree of flexibility to react to change quickly. These guidelines are purposely broad to accommodate any number of different events and scenarios. The JIC supervisor is responsible for amending and revising the procedures contained herein to best suit the objectives listed in Figure L-I-B-1.

**ORGANIZATION:** As the “front-line” organization the composition of the JIC will reflect the diversity of the organizations working to resolve the oil spill. Subject matter experts should be included into the staffing of the division. The JIC Supervisor reports to the PAO. There are five functions contained within the JIC.

1. **JIC Supervisor.** Responsible directly to the FOSC/SOSC for ALL official information gathering and dissemination, regardless of agency or government affiliation. Acts as spokesperson making all official statements or coordinating others. Acts as primary spokesperson on behalf of the UCS during interviews and news conferences. Oversees all JIC activities including records, releases, information gathering, inter-agency cooperation and media and public relations. Advisor. Proactively advise the USC regarding media and public expectations and perceptions. Prepare the FOSC/SOSC for briefings, conferences and town meetings. Has the final release authority for all UCS releases.

2. **News Desk.** Compiles, coordinates, and issues daily fact sheets, news releases and news advisories.

3. **Planning.** Responsible for setting the public affairs goals, objectives and looking into the next week.

4. Phone Bank. Group of public affairs professionals answering media inquiries using fact sheets and news releases already approved. Authorized to make releases over the telephone to the media. Documents/tabulizes calls for rumor control and assists with monitoring direction media is taking for news slant.

5. Media Escort. Public Affairs staffers that assist/facilitate media groups/pools on site locations. Able to answer questions and provide interviews. Arranges interviews on scene.

6. Media Monitoring. Collection of TV and newspaper clippings. Reviews for accuracy and files for historical documentation. Photocopies of newspaper articles circulated among PA and USC command staff for review.

### **TAB C NEWS RELEASES**

BACKGROUND: News releases have long been an effective tool and are an essential element of an effective media and public relations program. Releases must, above all, be accurate and timely to ensure credibility.

DISCUSSION: Releases can be made in many different forms; printed, call-out, and video taped photographic. It is imperative that ALL information released through the JIC be coordinated with the UCS to ensure accurate and complete information.

ACTION: All JIC members shall observe the following guidelines unless otherwise directed by the JIC supervisor. These guidelines are established to help get the most accurate and complete information to the media in a rapid and coordinated manner.

a. Frequency. As a minimum, two releases each day should be made, timed to satisfy the greatest media demands. During periods of 24 hour staffing, a release at 10:00 a.m. and one at 4:00 p.m. are preferable. More frequent releases may be warranted and should be issued as needed.

b. Content. Releases follow the Associated Press style guide using release or fact sheet format and will be sequentially numbered. Releases should represent the most complete picture of the UCS efforts, "en todo". Keep in mind that the purpose is to inform the public, not simply to represent an agency or department.

c. Distribution. Regardless of the location of an event, releases should be distributed to all wire services, television, daily print and radio stations that serve the local community. Depending on the magnitude of the incident, location and national interest, release to network, cable and international television may be warranted. Trade journals and other special interests should be included as they are identified.

d. Authority. All releases prepared under the purview of the UCS JIC must be authorized by the JIC supervisor. Although there may be occasions when releases exclusive to the efforts of one agency or entity may be warranted, it is preferable to include that information in a joint release rather than issue a separate release. Single agency releases are not specifically prohibited but should be avoided when possible and must be acknowledged by the JIC supervisor for continuity. All releases must have concurrence from the the senior representative or other designate of each agency portrayed in that release. It is also incumbent upon the JIC supervisor to ensure the FOSC/SOSC are fully informed of media demands and release content, and seek legal consult when warranted. Because of the overwhelming need for accuracy and full disclosure, media relations guidelines apply to all members of the UCS and are contained in Tab D of this Appendix.

e. Interviews. Like releases, interviews take many forms and formats. From fielding reporters' questions on a phone inquiry, to live remotes and everything in between, an interview may be planned or extemporaneous. In each of these opportunities, the information released must be accurate.

f. Briefings/Conferences. Briefings and news conferences should be held as frequently as public demand requires, consistent with the operational demands on the UCS staff. The JIC supervisor will make recommendations to the FOSC/SOSC regarding timing and frequency. It is imperative that the most senior representatives from the state and federal governments and the responsible party (RP) participate whenever possible. Additional subject matter experts are also recommended when their presence will assist in providing the most complete information. Media liaison representatives from the JIC should make all preparations including location setup, media kits, media notification and a full briefing for the FOSC/SOSC or their representatives. News conferences, briefings and media availabilities will be conducted by a member of the JIC who will advise the audience of the meeting sequence and set the boundaries within which the UCS is prepared to provide information and field questions. The FOSC, SOSC and RP should then present their briefings followed by a FINITE period of questions and answers. At the end of the Q & A period the FOSC and SOSC should depart directly and return to the command center leaving additional matter to the JIC media representatives and the RP.

#### **TAB D USC MEDIA GUIDANCE CHECKLIST**

**DISCUSSION:** Any member of the UCS, from the FOSC to the most junior government employee, may talk about their personal involvement in the cleanup with the media. Inquires outside of their involvement should be referred to the JIC. A person cleaning up an oil spill on a beach may discuss that portion of the cleanup but should defer questions such as "How long will it take to clean this up?" or "Who is responsible for the spill?" to the JIC.

1. Personal Opinion: This includes any time you are recognized or associated with the UCS or other government agency, on duty, or off. A good rule of thumb is to ask yourself "Would the person asking this question still ask it if they did not know of my involvement?"

2. When in Doubt: If you don't know, say so. Provide the number for the Joint Information Center.

**ACTION:** Checklist:

1. If you did it or are responsible for it, then you can talk about it.

2. Do not address policy. Refer reporters to the JIC.

3. You may NOT discuss information that is part of an ongoing investigation.

4. Do not speculate.

5. Do not give personal opinion while in an official capacity.

6. Report interviews or comments with the media directly to the JIC.

7. A decision NOT to release information other than that which is under investigation MUST be cleared through the FOSC/SOSC.



## **APPENDIX II COMMUNITY RELATIONS**

I. BACKGROUND: Providing information directly to members of the impacted community, free of the filtering and potentially distorting effect of the media is critical to public understanding of the incident response. Community relations may include scheduling of public meetings, preparing speeches and coordinating public activities with public officials and protocol personnel.

II. DISCUSSION: In order to ensure that important constituencies are not overlooked or slighted during a major response, it is important that a Community Relations officer be assigned to the public affairs element. Under no circumstances should community relations be a collateral duty of the media relations officer during a major incident. A local government official should be considered for the position. Additional community relations officers should be sought from the RRT and regional EPA office to provide expertise to this important aspect of the public affairs program.

III. ACTION: Important considerations for establishing a separate Community Relations branch include; health & safety, damage claims, and transportation disruptions. The media cannot provide detailed information to their audiences on issues that affect smaller groups of individuals. It is incumbent on public affairs to provide answers to the impacted communities. A well-run community relations program is a two-way street in a successful public affairs program. Authoritative answers to important individual questions are given and the UCS gains a “grass-roots” feel for the concerns of the individuals directly impacted by the spill. Those concerns can then be addressed by the UCS staff to mitigate problems before they drive the cleanup effort.

1. HEALTH & SAFETY The primary, initial concern of the community relations staff should be answering the health & safety issues. When warranted, an EDIS alert should be issued outlining the specific health & safety concerns (toxicity, volunteer cleanup [See also Annex J, Appendix II, Tab O]).

2. PHONE BANKS Consideration should be given to establishing an “800” telephone bank for general public inquires. Questions about health & safety, transportation disruptions, claims, and current information would be disseminated by a team of operators separate from media inquiries. Ideal staffing would include representatives from federal, state, county, and local governments and community affairs personnel from the responsible party. This conduit would serve as rumor control and provide the UCS with current local citizen concerns. Spokespersons should use the Conversation Record (See Figure L-I-E-4) to track the public’s concerns.

3. TOWN MEETINGS Local community meetings should be considered by the USC when communities are severely impacted either economically, environmentally, or recreationally. In extremely large communities arrangements should be made for teleconference sites in addition to the “live” site.

4. CLAIMS Questions about damage to private vessels, loss of income, disruption of transportation become real concerns in a major oil spill. Information directing individual recourse must be addressed early in the cleanup process. The Responsible Party will take the lead on addressing these issues and provide the community relations branch with information that alleviates and mitigates these real concerns.

### **APPENDIX III INTERNAL INFORMATION**

1. PURPOSE: Informing the members of the response community of the status of the response is vital if consistent and accurate information is to be conveyed to all interested parties. Internal information is the process of informing our own people of the status of our activities.
2. DISCUSSION: At a minimum, all personnel assigned to response duties should be provided with access to the daily fact sheet prepared by the media relations officer. This will help ensure a consistent and accurate flow of information.
3. ACTION: Distributing copies of the fact sheets and news releases to the cooperating agencies and their employees is a function of the internal information staff. During clean-up operations of a lengthy duration, consideration may be given to a computer generated or hard copy publication published at regular intervals.

### **APPENDIX IV PROTOCOL**

- I. PURPOSE: Accompanying a spill of significant public interest will be an increased demand for information from public officials. The protocol staff is responsible for fielding calls from public and elected officials. They should also prepare briefing materials for elected or public officials who may request information about the incident.
- II. DISCUSSION: In this discussion of a SONS case, it is conceivable that high-level public interest will require the attention of the UCS command staff and generate media attention.
- III. ACTION: It is incumbent upon the Protocol Officer (and staff) to arrange for a meaningful visit by these officials, provide access to the media, and demonstrate through discussions and briefing materials the objectives and needs of the UCS command staff. While reporting to the PAO, the Protocol Officer is permitted direct access to the UCS command staff in organizing visits by the public and elected officials.

### **APPENDIX V PHOTO DOCUMENTATION**

- I. PURPOSE: Documentation both still and video, has a three-fold purpose: (1) Additional resource material for news media outlets, (2) briefing materials for town meetings and protocol sanctioned visits, and (3) historical documentation. It is not the intention of establishing this branch to provide documentation for a legal action against the responsible party or spiller. Separate arrangements must be made by legal entities to provide this function for litigation.
- II. DISCUSSION: As a branch reporting directly to the Deputy PAO the needs of the UCS command staff are prioritized and assigned by this individual. When the media cannot visit locations due to safety concerns, it is the responsibility of the photo documentation branch to provide this information.
- III. ACTION: Resources available to fill this requirement begin with the three lead agencies of USCG, OSPR, and RP. Access and assistance from the DOD's Combat Camera should be solicited by the FOSC by message traffic early in the clean-up effort.



## **APPENDIX VI ADMINISTRATION**

1. PURPOSE: Provide administrative support to the various branches of the public affairs effort. This includes the JIC, Community Relations, Protocol, and Photo Documentation branches. Record-keeping, purchasing, and logistics support is provided by the administration branch.
2. ACTION: Reports directly to the Deputy PAO and is assigned tasking according to the needs of the five branches of public affairs.
3. STAFFING: Immediate staffing (first 48 hours) should consist of 1-YN and 1-SK with district and Reserve augmentation following for the longer duration.

# Annex M

|              |                                        |    |
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## **ANNEX M HAZARDOUS MATERIALS**

### **APPENDIX I SCOPE**

#### **TAB A INTRODUCTION**

This Annex is intended to meet the Federal Water Pollution Control Act (FWPCA) requirement for hazardous substance-release contingency planning. Public Law 101-380, which created the Oil Pollution Act of 1990 (OPA 90), also amended the FWPCA to require contingency planning for releases of hazardous substances. That amendment is found in Title 33, United States Code, Section 1321(j)(1).

While the law requires planning for “hazardous-substance” releases, the developers of this Annex have chosen to use the broader term “hazardous materials” for plan development, as defined in Annex A, Appendix II of the ACP. Essentially, this Annex addresses response to any undesirable non-oil substance leaked into the environment.

This Annex outlines the jurisdictional boundaries of hazardous-materials (hazmat) incident response between federal, state, and local agencies, defines the locally available response assets to address a hazmat incident, and utilizes scenarios to describe likely response activities in hypothetical circumstances.

#### **TAB B BACKGROUND**

In addition to examining the prevention and response to oil-related incidents, the FWPCA addressed hazardous substances as well. In previous versions of the Area Contingency Plans (ACPs), hazardous-substance issues were given only cursory attention, given the complexity of the subject and the more immediate mandate of outlining emergency response to oil. In this year’s ACPs an effort has been made to address the issues concerning hazardous materials in more detail, with the understanding that this is an iterative process and more work will be required in future planning cycles. Next year’s 1996 version is expected to further refine this year’s draft section on hazardous materials.

For the purposes of this section, the discussion will be limited to hazmat incidents occurring during marine transportation only. This approach has been taken in order to isolate the issues of jurisdiction and response procedures to one clearly defined area. Scenarios have been developed using this approach to further examine all issues surrounding hazmat incidents on water.

In accordance with the California Hazardous Materials Incident Contingency Plan (HMICP), response and management of a hazmat incident is primarily the responsibility of local government acting as the lead for public health and safety within their jurisdiction. This is especially true when an incident occurs in an inland location. Local fire and police departments and other emergency personnel who have been trained in response procedures for hazmat incidents will respond and be the first officials to begin handling the emergency. If other local assistance is required, or, due to the size of an incident, state or federal resources are needed, a larger response network is built through the incident command system and a unified command representing joint decision-making authority will be developed. The vast majority of relatively routine hazmat incidents are handled in this manner.

However, hazmat-incident response in the marine environment offers a unique set of variables that do not lend themselves to be defined along clear jurisdictional lines. Local government personnel may have the resources and training to respond properly to land-based incidents, but do not have the expertise of dealing with marine firefighting or emergency response on water. Conversely, the U.S. Coast Guard has the expertise to manage

many marine incidents, such as fire, disabled vessel management or rescue, but has only basic training in hazardous material emergency management. The method to properly respond is further complicated by the introduction of state and federal specialized response teams that have the proper training to assist in an incident response, but must be correctly requested and then integrated into the management structure in order to properly aid the incident-command team.

The question of who is in charge of an incident and who actually manages the incident may be two separate entities. Section 311(c)(1) of the Clean Water Act (CWA), as amended by the Oil Pollution Control Act of 1990, gives the OSC authority to “direct or monitor all Federal, State, and private actions to remove a discharge” (emphasis added). The National Contingency Plan, as revised on Thursday, September 15, 1994, states in Code of Federal Regulations title 40, part 300, section 135(d) [40 CFR 300.135(d)] that “the OSC’s efforts shall be coordinated with other appropriate federal, state, local, and private response agencies. OSCs may designate capable persons from federal, state, or local agencies to act as their on-scene representatives.” Thus, a local government may manage a response, and the OSC’s only involvement would be notification and confidence that the local official, serving as the OSC on-scene representative, had the capabilities to conduct an effective response, with OSC assistance as needed.

The method by which an emergency is managed is contingent upon two variables: the incident’s location and size. If at dock, where local responders can have direct access to a site, local government will start out in the lead. If the incident is on an anchored vessel or at sea, the Coast Guard will likely begin as the incident commander. Initial response to marine hazmat emergencies will involve local-government responders, the U.S. Coast Guard, and appropriate state agencies, but as the incident grows and the need for specialized personnel and resources increase, the incident-command system will expand and the unified command will be formed with the responsible decision makers. Given the specifics of a particular incident, the lead authority in the unified-command team would likely be the local government or the U.S. Coast Guard, with potential involvement by the responsible party (spiller) and the state.

Communication and coordination will be paramount in any hazmat incident in order to ensure a proper response structure is established and clear lines of authority exist.



## **APPENDIX II GOVERNMENTAL POLICY AND RESPONSE**

### **TAB A INTRODUCTION**

The response system for the governmental agencies widely differs depending on which level of government is involved. Each level has its own unique capabilities, responsibilities, response strengths and authorities. The following Tabs describe the response actions and systems for the federal, state, and local agencies as viewed by the agencies themselves.

### **TAB B FEDERAL POLICY AND RESPONSE**

Under the National Contingency Plan, the federal On-Scene Coordinator (OSC) is the senior official for all response efforts. These responsibilities are shared between the Coast Guard and the Environmental Protection Agency (EPA). The Coast Guard provides the OSC for oil discharges and hazmat releases into or threatening the coastal zone. EPA provides OSCs for oil discharges and hazmat releases into or threatening the inland zone. The Coast Guard OSC has responsibility for spills, releases and threatened spills and releases from vessels and Coast Guard-regulated marine transportation-related facilities. The boundaries between the Coast Guard and EPA zones can be found in the Regional Contingency Plan, Annex II, and in the Area Contingency Plans, Annex A, Appendix IV.

The role of OSC is radically different depending on the material involved in a spill or threatening to impact the federal waters. In incidents involving oil, the Coast Guard OSC takes a very active role in the response. The OSC serves as the senior member of the Unified Command and directs the response activities. For hazmat releases or threatened releases, the OSC looks after federal interests and provides support to the local, county or state responding agency. The OSC would assume an active role only under specific circumstances, such as when an incident exceeds response capabilities of local agencies. The OSC would assist the state and local agencies with any technical advice and to monitor the response.

There are seven areas of Coast Guard response in the event of a chemical release. The paragraphs in italics are from a Coast Guard Headquarters directive, and the subsequent paragraphs contain amplifying information.

(1) Conducting local contingency planning for response to hazardous chemical releases.

The Marine Safety Office (MSO) is not a response organization. It is not our intent to create a contingency plan for response organizations. This annex will identify the resources and authorities held by the Captain of the Port, San Francisco Bay, that may assist in a hazardous material incident response.

(2) Conducting traditional Captain of the Port (COTP) response measures such as restricting access to the affected area and controlling marine traffic; notifying facilities operating vulnerable water intakes of the release; coordinating with state and local emergency forces; and assisting as resources and capabilities permit.

In Northern California, the Commanding Officer, USCG Marine Safety Office San Francisco Bay (CO, MSO SFB) is designated as the COTP from the California-Oregon border south to the Monterey County-San Luis Obispo County line.

U.S. Coast Guard COTPs serve as the designated OSCs for the coastal zone. Therefore, CO, MSO SFB is the OSC for the northern California coastal zone.

For this annex, which is confined to Mendocino County, Humboldt County, and Del Norte County, the coastal

zone consists of the waters (not any land) from the seaward edge of the Exclusive Economic Zone (EEZ, commonly referred to as the 200-mile limit) to the dividing line between Coast Guard and EPA responsibilities:

From the intersection of Highway 1 and the Sonoma County/Mendocino County line north along Highway 1 to Usal Road near Rockport; north on Usal Road to Chemise Mountain Road; north on Chemise Mountain Road to Shelter Cove Road; west on Shelter Cove Road to Kings Peak Road; north on Kings Peak Road to Wilder Ridge Road; north on Wilder Ridge Road to Mattole Road; north and west on Mattole to Highway 1 at Ferndale; north on Highway 1 to Highway 101 at Fernbridge; north on Highway 101 to Front Street; west on Front Street to A Street; north on A Street to Sixth Street; west on Sixth to Pebble Beach Drive; north on Pebble Beach Drive to Washington Blvd.; east on Washington to Lake Earl Drive; north on Lake Earl Drive to Highway 101; north on Highway 101 to the California-Oregon border.

The Commanding Officer of the MSO is designated by the Commandant of the Coast Guard as the COTP for the purpose of giving immediate direction to Coast Guard law enforcement within his assigned area.

The COTP San Francisco Bay Area Of Responsibility (AOR) comprises the land masses and waters of Utah, except for Washington, Kane, San Juan, and Garfield Counties; Nevada, except for Clark County; and all of California north of San Luis Obispo, Kern, and San Bernardino Counties. Note that the AOR for the Coast Guard COTP authority is not the same as the AOR for the Coast Guard OSC authority.

The COTP can control access to an area by establishment of an safety zone. That safety zone can include waterfront facilities, vessels, and areas of water or land, or both.

The COTP can enlist the aid of Federal, state, county, municipal, and private agencies to assist in the enforcement of access control. This section also allows use of Coast Guard resources for transportation of hazardous material incident responders, both government agencies and commercial.

The COTP can control marine traffic by directing vessel movements in a specified area.

The COTP can create a COTP order directing a specific vessel's operation, including anchoring, for, among other things, "temporary hazardous conditions".

The COTP can prohibit entry into U.S. waters for multiple reasons, including discharges of oil or hazardous materials.

The COTP can request a response from our Pacific Area Strike Team (PST) at Novato, California. The PST is the only hazardous materials response organization directly controlled by the Coast Guard.

The COTP can have other Coast Guard units make marine band radio broadcasts for both informational purposes and to assist enforcement actions.

The Officer in Charge, Marine Inspection (OCMI) is tasked with inspection of vessels, shipyard and factory inspections, investigation of marine casualties and accidents, licensing mariners, and enforcement of vessel inspection, navigation, and seamen's laws in general.

The OCMI AOR is the same as the COTP AOR above.

(3) Conducting a preliminary assessment of the incident to: (1) evaluate the magnitude of the threat to the public health and welfare and the environment, (2) determine if response action by the spiller and/or the

state and local government is adequate, (3) establish jurisdiction for a Federal response, and (4) collect the data necessary to formulate a response plan if a Federal response is warranted.

County and municipal agencies may have jurisdiction and responsibility. Their responders may require transportation, and the COTP may be able to arrange it.

If the COTP can bring expertise, personnel, or equipment to assist a problem at sea, we do not expect an offer of assistance to be declined. If the incident is at sea, the COTP can also contact Special Forces (USCG National Strike Force (NSF), EPA Environmental Response Team (ERT), NOAA Scientific Support Coordinator (SSC), EPA Technical Assistance Team (TAT), etc.) for recommendations.

(4) Contacting the owner and/or operator of the source of the release, if known, to inform them of their potential liability for government removal costs, to explain the Coast Guard's role as OSC, and to gather information for response and port safety purposes. Administrative orders shall be used when appropriate to direct actions of the responsible party.

The state has various funding sources of their own, and should evaluate appropriate state sources before seeking CERCLA money.

Please note that while the COTP can issue an administrative order to a facility under the authority of CERCLA Section 106, the definition of facility under CERCLA section 101(9) does not include vessels. Therefore, the COTP cannot issue administrative orders to vessels. The COTP may, however, be able to use a COTP order to accomplish the same effect.

(5) Based on the findings of the preliminary assessment, carrying out first aid mitigation actions if the situation warrants immediate action. First aid mitigation actions are those response actions taken by OSC personnel necessary to address immediate concerns prior to the arrival of cleanup contractors or action by the responsible party.

(6) Monitoring cleanup actions of responsible parties or, in the case of Federal removals, providing on-scene supervision of removal activities, ensuring the employment of a sound removal strategy. The OSC is not expected to be capable of designing and carrying out a complex removal plan. In certain situations, support from Special Forces (E.G. National Strike Force (NSF), EPA Environmental Response Team (ERT), NOAA Scientific Support Coordinator (SSC)) may be necessary to assist in the development or review of a removal strategy. In either case, the OSC shall ensure that guidelines regarding worker safety are adhered to by all parties involved in the response.

To create a site safety plan, COTP may require the assistance of the ship's agent or shipping company for providing both the hazardous materials manifest and assistance in creating a removal strategy.

(7) For Federal removals, arranging for the services of contractors and supervising their actions, ensuring that response costs are documented as required by Chapter 86 of the Marine Safety Manual.

## **MARINE SAFETY OFFICE SAN FRANCISCO BAY**

Marine Safety Office San Francisco Bay may be reached at:

**24-hour phone:** 510-437-3073     **24-hour fax:** 510-437-3072

The fax is attended daily from approximately 6:00 A.M. to 10:00 P.M. If an incoming fax must be seen



immediately between 10:00 P.M. and 6:00 A.M., please call the 24-hour phone number first to alert the watchstander.

### **TAB C STATE POLICY AND RESPONSE**

In California, the state's main role in any hazmat incident is to assist local government, and take part in the unified command as appropriate. Certain resources exist at the state level, and if requested can be made available to assist federal and local responders in a marine hazmat incident.

A release or threatened release of a hazardous material within the State of California must be reported. Hazardous material includes any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health or safety or to the environment, if released. There is no minimum reportable quantity. An immediate verbal report of any release or threatened release of hazardous material must be made to (1) the local emergency response agency (such as 9-1-1, or the fire or health department, as directed by local laws), then (2) to the Governor's Office of Emergency Services (OES) at 800-852-7550 or 916-262-1621. This immediate report should include: location of the release or threatened release; the name(s) of the person(s) reporting; hazardous material involved; estimates of the quantity, and potential hazards presented by the material.

OES will notify other federal and state agencies and appropriate local government contacts as specified in law. Assistance may be sought from local agencies, other state agencies, or the federal government for any incident response. Additionally, the notifier or responders may request that OES contact specialized state agencies (such as DTSC) for additional assistance. In California, the primary state agencies that will assist the incident responders are the following:

Department of Fish and Game (DFG) - the department has the lead state authority for any off-highway spill. DFG will also be actively involved with the transition of an incident from the emergency response phase to the longer-term environmental remediation phase;

Department of Toxic Substances Control (DTSC) - as part of California's Environmental Protection Agency (Cal EPA), DTSC has expertise handling and responding to a situations involving hazardous materials;

Office of Environmental Health Hazard Assessment (OEHHHA) - also part of Cal EPA and is concerned with researching and responding to a substance's impact to human health and the environment;

California Highway Patrol (CHP) - the primary state responder to any on-highway incident;

Regional Air and Water Boards - are both part of Cal EPA and have jurisdiction for air and water quality in their areas.

Hazmat responses will be conducted under the auspices of the California Standardized Emergency Management System (SEMS) (Chapter 1, Division 2, Title 19, California Code of Regulations). SEMS defines the principles of the incident-command system, incident resources and facilities, and common responsibilities. The key components of SEMS are:

- (1) Five levels of emergency management will be used statewide to create uniform organization and terminology. The five levels are field/incident, local government, operational area, region, and state.
- (2) Five standard functions of the emergency response organization at all levels will be used. The

five levels are command/management, operations, plans/intelligence, logistics, and finance/administration.

(3) The Operational Area (county) will be the central coordination point for information and resources at a major local incident.

(4) A statewide master mutual-aid system exists for coordination of operational area, regional, and state resources during major emergencies.

(5) An Operational Area Satellite Information System (OASIS) can be used to link all operational areas and OES via satellite communications.

(6) All state and local agencies must use SEMS during disaster responses and it is an eligibility requirement for local governments and agencies to receive state reimbursement following a disaster.

(7) SEMS guidelines and information on an approved course of instruction are available from state OES.

Further responsibilities and resources are contained in the California Hazardous Material Incident Contingency Plan (HMICP), compiled by the state OES. The HMICP contains a listing of additional federal, state, and local resources available during a response to a hazmat incident. The HMICP also outlines the policy and process that should be followed during a hazmat incident in California. The HMICP is currently being rewritten to be consistent with SEMS and other state response programs that the Legislature has created since its last edition.

For most hazmat emergencies, local-government responders will be on scene first at an incident within their jurisdiction. If not present on the scene, local-government representatives should be brought into the management of the incident as soon as possible. Generally, in any hazmat incident assisting agencies will respond from three functional areas:

(1) Fire Services - Certain fire departments have established a hazmat response team whose organizational structure will provide the necessary supervision and control for the essential functions required at a hazmat incident.

(2) Law Enforcement - The local law-enforcement agency will respond to most hazmat incidents. Depending on the incident factors, law enforcement may be a partner in the unified command of the incident, or may participate as an assisting agency. Some functional responsibilities which may be handled by law enforcement include: isolating the incident area; managing crowd control; traffic control; providing protective public action, such as evacuations or sheltering-in-place; and managing criminal investigations.

(3) Environmental-Health Agencies - In most cases, the local or state environmental-health agency will be at the scene as a partner in the command of the incident. Some functional responsibilities which may be handled by environmental-health agencies include: determining the nature and identity of the hazardous material; establishing the criteria for cleanup and disposal of the material; declaring the site safe for reentry by the public; providing the medical history of exposed individuals; monitoring the surrounding environment; assisting in the cleanup of the site; and providing technical advice.

These three functional areas will be addressed through local, state and federal officials responding to the incident utilizing the incident-command system. The design of the ICS structure and the makeup of the unified command will be determined by the specifics of a particular incident.

Currently in California a system of hazmat mutual aid is being developed. A specific subset of the master mutual-aid program in the state, the hazmat-specific program will simplify and organize procedures for responding agencies to share personnel and resources during an incident, however large. The text of this program should be available at the end of 1995.

#### **TAB D LOCAL GOVERNMENT POLICY AND RESPONSE**

Pursuant to the California Health and Safety Code Chapter 6.95, local governments have developed local area plans (which differ from the Federal ACPs) documenting policies and procedures for responding to hazmat incidents. These policies and procedures include sections on notification and coordination, communications, utilization of the incident-command system, pre-emergency planning, public safety and information, supplies and equipment, and responsibilities of responding organizations. The main responsibilities of the response agencies are to rescue and treat victims, perform fire suppression, isolate contaminated areas from the general public, control and contain hazardous materials, and facilitate any public evacuations or shelter-in-place operations. The area plan delineates who is responsible for management of the incident. Local area plans may differ on the designee of the incident commander. Representatives from local police, fire, or offices of emergency services may be the incident commander. Due to the proximity of these public safety agencies to potential hazmat sites on land they can respond quickly and adequately within their jurisdiction.

In regards to jurisdiction, area plans specify what locations would be covered for response by hazardous materials agencies. Jurisdictions may include one or more counties, one or more cities, unincorporated areas or any combination thereof. Jurisdictions may include all areas within city or county limits, which may include adjacent waters. Area plans may or may not discuss jurisdictions and response for the adjacent waters. Many local governments may not have considered response to hazardous materials for incidents which occur at docks, at adjoining bays or inlets, and at coastal waters. Their response in these waters may not have been considered due to a perception of the role of the U.S. Coast Guard and the California Department of Fish and Game in spills of oil and other petroleum-related products. Also, a local government's ability to respond to waterborne incidents may be limited.

In the coastal zone the legal OSC resides with the U.S. Coast Guard. However, the on-scene management of the incident may reside with the appropriate local government agency responder.

Local agencies may have a number of limitations in handling hazardous materials in waters and vessels. These include:

- Access to marine vessels;
- Communications with the master of the vessel;
- Hazardous materials experience with vessels;
- Experience with vessel operations;
- Knowledge and access to booming resources; and,
- Experience with marine contractors.

Therefore, the ability of representatives of local agencies to respond and be the incident commanders for hazmat marine incidents is limited.

Local agencies will vary in their ability to respond to incidents which occur in waters. The following is a general summary of local agency capabilities. These are more fully addressed in Appendix III, Tab B - Scenarios.

Docked Vessels - Most local agencies should be able to respond and take charge of incidents which occur at

docked vessels. They may still require assistance from the Coast Guard to control vessel traffic, notify facilities with vulnerable intakes, and conduct booming.

Vessels at Anchorage - Some local agencies may be able to respond to incidents on vessels at anchor in bays or inlets. They may have the transportation and communication capabilities to handle the incident. There will probably be a greater need of assistance from the Coast Guard.

Vessels Underway - Few, if any, local agencies will be able to respond to incidents which occur off the coastal waters in the Pacific. For most incidents, the Coast Guard will be the primary response agency.

In all cases where hazmat incidents may impact local jurisdictions, local agencies must be notified. Even if local agencies cannot take mitigation actions at the vessel, they will still need to respond. Local governments will be responsible for the public safety of its citizens and property. They can control public access to contaminated areas. Local agencies can notify and possibly protect coastside facilities which may be impacted. Local agencies can provide logistical help to the lead agency. They can also provide personnel and other resources to the lead agency. Most local governments will provide mutual aid on request.

## **APPENDIX III SCENARIOS**

### **TAB A MAJOR THREATS**

The scope of this Annex is confined to marine transportation-related hazmat incidents, and this Tab is reserved for risks from bulk shipments of hazardous materials. There is only one bulk shipment of hazardous materials across the shoreline in the North Coast area, liquid caustic soda solution transported by barge into Eureka.

### **TAB B SCENARIOS**

The required scenarios for this Tab are: At Dock; Underway Inland Waters; and Underway High Seas. The scope of this Annex is confined to marine transportation-related hazmat incidents, and this Tab is reserved for containerized or intermodal shipments of hazardous materials. There are no such shipments of hazardous materials across the shoreline in the North Coast area. Therefore, there are no hazmat-response scenarios developed for this Area Contingency Plan.

## **APPENDIX IV RESPONSE ASSETS**

This Appendix identifies response organizations by their response area, beginning with county assets, then municipal assets, then nongovernmental organizations. Nongovernmental organizations include chemical mutual-aid organizations, individual companies with response units, and information sources.

Included with each response unit entry is a FIREScope description of that unit's capability. FIREScope is the Firefighting Resources of California Organized for Potential Emergencies, a mutual-aid organization originally based on fire response, but also involved with ICS development and, now, hazmat response.

Their hazmat-response unit descriptions are as follows:

### **HAZMAT COMPANY TYPE I HAZMAT COMPANY TYPE II**

| Capability: | Unknown Chemical Entry                                                                                                                                                                                                                                        | Known Chemical Entry                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| PPE Level:  | Level "A"<br>(fully encapsulated (splash suiting w/ SCBAs)<br>suiting)                                                                                                                                                                                        | Level "B"                            |
| Equipment:  | All of Type II company<br>equipment, plus:<br>Chemical references<br>Computer air modeling<br>Capabilities for sampling<br>Special detection & monitoring (combustible<br>monitoring gas/oxygen concentration/<br>radiological/pH/<br>Heat sensing oxidation) | In-suit communications               |
|             | Chemical-hazard<br>categorizing                                                                                                                                                                                                                               | Plugging & patching<br>(liquid only) |

Plugging & patching  
(vapor)

Diking, absorption,  
neutralization

Large leak intervention

Personnel: 5\*

5\*

\* At least one company member trained to minimum level of Assistant Safety Officer, Hazmat (ICS-HM-222-5).

## **TAB A COUNTY**

### **DEL NORTE AND HUMBOLDT COUNTIES**

#### **COUNTY-WIDE RESPONSE**

Eureka Fire Regional Hazardous Materials Response Team

Response within all of Del Norte and Humboldt Counties under a Joint Powers Agreement (JPA) between the counties.

FIREScope HAZMAT Company, Type I.

Chief John McFarland

Business: 707-441-4000 **24 hr Emer: 707-441-4044**

Fax: 707-441-4133

### **MENDOCINO COUNTY**

#### **COUNTY-WIDE RESPONSE**

Mendocino County Environmental Health Department,  
Hazardous Materials Division

FIREScope HAZMAT Company, Type I.

Captain Randy Leach

Business: 707-463-4466 **24 hr Emer: 707-459-7404**

Fax: 707-463-4138

Ukiah Valley Fire District,  
Redwood Empire Hazardous Materials Incident Team (REHIT)

FIREScope HAZMAT Company, Type I.

Captain Randy Leach

Business: 707-462-7921 **24 hr Emer: 707-459-7404**

Fax: 707-462-2938

## **TAB B REGIONWIDE RESOURCES**

### **CHEMTREC (Emer: 1-800-424-9300, Nonemer: 1-800-262-8200) -**

a 24-hour public service of the Chemical Manufacturers' Association; can provide:

- (1) immediate emergency action information for spill, leak, exposure, or fire control measures;
- (2) precautionary information;
- (3) assistance in identification of a hazardous substance if the manufacturer is known or if shipping papers are present; and,
- (4) immediate notification of manufacturers or shippers through their emergency contacts or notification of industry mutual-aid networks.

CHEMTREC can also assist with the following specific actions:

- (1) They now operate the National Poison Antidote Center (NPAC) with immediate information of most known poisons and communications to all major hospitals.
- (2) They can contact the chemical manufacturer for detailed technical information, and, in some cases, activation of the manufacturer's response team.
- (3) They can contact carriers for technical information, waybill or cargo manifest printouts, and some carriers can assist with chemical- and wreckage-removal operations.
- (4) While the Chlorine Emergency Plan (CHLOREP) is organized by the Chlorine Institute, it is activated by CHEMTREC.

### **CHEMICAL COMPANIES WITH ASSISTANCE OR INFORMATION RESOURCES**

|                                             |                                                                                                                                                   |              |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| AMERICAN CYANAMIDE                          | Will assist and provide information on their products (24-Hours)                                                                                  | 201-835-3100 |
| B.A.S.F. WYANDOTTE                          | Will provide information on their products                                                                                                        | 313-282-3300 |
| DOW CHEMICAL CO.                            | Will assist and provide information on their products, advice available for chlorine incidents.                                                   | 517-636-4400 |
| DU PONT                                     | Will assist and provide information on their products, advice and response available for chlorine and hydrogen fluoride incidents on or off site. | 302-774-7500 |
| NATIONAL AGRICULTURAL CHEMICALS ASSOCIATION | Will provide information on pesticides.                                                                                                           | 513-961-9300 |
| UNION CARBIDE                               | Will assist and provide information on their products.                                                                                            | 212-551-2345 |